

understood to provide ex ante incentives to undertake innovative activity to generate new products, but it can create the problems of overcompensation described in Chapters 2 and 4. Those problems include encouraging lie-in-wait behavior – ex post licensing and litigation by patentees rather than ex ante efforts at technology transfer and the creation of new products.⁵⁵

The availability of hold-up value to patentees may indeed encourage invention and patenting activity, but that is not the same thing as encouraging the innovation necessary to bring new products to market. Invention is the first step of innovation, but innovation often requires significant additional development activity beyond that first step in order to get new products and services to consumers.⁵⁶ While increased invention and patenting activity will lead to increased innovation in many contexts, it can decrease innovation in others. The risk that patentees that have made no technical contribution to a product can extract hold-up value from manufacturers increases uncertainty and costs and discourages innovation by those manufacturers.⁵⁷

C. Balancing Reasons for Granting and Denying Injunctions

These reasons for granting and denying injunctions should be balanced for the patent system to promote innovation while maintaining alignment with competition policy. Although the potential costs from hold-up should be considered, not all hold-up warrants denial of an injunction. Denying an injunction every time an infringer's switching costs exceed the value of the invention ex ante would dramatically undermine the ability of an injunction threat to deter infringement, protect a patentee's exclusivity, and encourage licensing. An important step in balancing these concerns is to set forth criteria that would help identify those situations in which the costs of hold-up resulting from an injunction exceed the benefits of exclusivity due to the patent grant.

A first criterion considers whether the patented technology is a minor component of a complex product that would have been easy to design around ex ante.⁵⁸ When true, these are the cases in which the ex ante value of the patented technology is most likely to be small relative to the cost of hold-up based on the value of the entire product. In contrast, depriving a patentee of

⁵⁵Cotter, *supra* note 40, at 1168-69, 1179; Joseph Farrell, John Hayes, Carl Shapiro & Theresa Sullivan, *Standard Setting, Patents, and Hold-up*, 74 ANTITRUST L.J. 603, 622-23 (2007).

⁵⁶See Chapter 1.

⁵⁷See Chapter 2; Meyer at 69-70 (2/12/09). See also John Johnson, Gregory K. Leonard, Christine Meyer & Ken Serwin, *Don't Feed the Trolls?*, 42 LES NOUVELLES 487, 488 (Sept. 2007); Mark A. Lemley & Philip J. Weiser, *Should Property or Liability Rules Govern Information?*, 85 TEX. L. REV. 783, 786-88 (2007).

⁵⁸Cotter, *supra* note 40, at 1171; Layne-Farrar at 82-83 (2/12/09) (requiring that infringement have been easy to avoid ex ante had the infringer known of the patent).

exclusive control over an invention that provides the majority of value to a product risks undermining the patent system's incentives to make and develop significant advances.

A second criterion considers whether the infringer uses the patented technology to compete against the patentee and the effect of the infringement on that competition. The patentee's ability to compete in both product and technology markets is important. A lack of competition is more likely to support a conclusion of problematic hold-up, although that analysis involves important subtleties discussed below. A third criterion is the absence or presence of copying.⁵⁹ This consideration is needed to support the ability of an injunction threat to deter infringement and encourage parties to negotiate a license.

V. ANALYZING EBAY'S FOUR FACTORS

Although the criteria discussed above can help assess whether the harm from hold-up might outweigh the benefits from exclusivity for a particular invention, a court's analysis and the parties' arguments will be structured according to the four equitable factors set out in the Supreme Court's *eBay* decision. In fact, concerns about balancing the harms and benefits of injunctions to innovation and competition fit well within the *eBay* framework.

A. Irreparable Harm/Inadequacy of Money Damages⁶⁰

Much of the discussion on the state of injunction law post-*eBay* has focused on whether the patentee and infringer compete in a goods market. Conventional wisdom assumes that non-practicing patentees, meaning those who do not compete in sales of a product, cannot obtain injunctions because money damages will adequately compensate any harm they may suffer from infringement. Conventional wisdom also assumes that a patent owner practicing the patent can and should always be granted an injunction. The case law review in Appendix B demonstrates that neither assumption is accurate or consistent with the Supreme Court's explicit warning against categorical rules in the injunction analysis.⁶¹

Moreover, assumptions about irreparable harm based solely on whether the patentee practices the invention do not achieve the balance described above. On the one hand, the class of non-practicing patent owners is too diverse to be subject to a simple rule. It includes universities,

⁵⁹See Denicolò et al., *supra* note 51, at 573, 590-91 (requiring that infringement be inadvertent); Lemley & Shapiro, *supra* note 33, at 2036-37 (requiring that infringer have independently developed the technology and not copied it).

⁶⁰As discussed in Appendix B, Section III.A, courts and commentators often analyze the first two *eBay* factors as one.

⁶¹*eBay*, 547 U.S. at 393.

start-ups, semiconductor design houses and patent assertion entities, to name a few.⁶² On the other hand, a practicing patentee's assertion of a narrow patent on a minor component can generate the negative consequences of hold-up in the same way that a non-practicing patentee's can. Fortunately, the equitable test that governs the injunction analysis empowers courts to apply a flexible, fact-specific approach to decision making.

A patentee that licenses as part of a technology transfer program, such as a university or semiconductor design house, can suffer harm from infringement that is more akin to that suffered by a manufacturing patentee. Although this category of non-practicing patentees does not compete in a goods market, it does compete in a technology market⁶³ to have its technology purchased for incorporation into new products. As one court explained, such patentees compete for "design wins."⁶⁴ The harm suffered by these patentees as a result of infringement can be analogous to that suffered by manufacturing patentees, including loss of a customer base, industry disregard of its patent rights, and harm to reputation as an innovator.⁶⁵ Where a patentee wishes to exclusively license, infringement can destroy its ability to do so. The availability of an injunction is important to such patentees, who rely on the threat to deter infringement, encourage ex ante licensing, and prevent infringer hold-out.⁶⁶

However, when a non-practicing patentee seeks to license broadly, denial of an injunction in the interest of avoiding hold-up and overcompensation may not prevent the patentee from receiving the full value of the invention. This is more likely to be true when the patentee is a PAE seeking to license companies that had independently created and marketed the technology. A PAE will not have the same concerns about deterring future infringement and protecting its reputation as an innovator that other patentees may have.⁶⁷

⁶²See Chapter 1.

⁶³U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST GUIDELINES FOR THE LICENSING OF INTELLECTUAL PROPERTY § 3.2.2 (1995) ("Technology markets consist of the intellectual property that is licensed . . . and its close substitutes . . .").

⁶⁴Broadcom Corp. v. Qualcomm, Inc., 543 F.3d 683, 702 (Fed. Cir. 2008).

⁶⁵Commonwealth Scientific and Indus. Research Org. v. Buffalo Tech., Inc., 492 F. Supp. 2d 600, 604-05 (E.D. Tex. 2007) (explaining that infringement can harm reputation and a research institution's ability to obtain funding and recruit scientists just as it can harm brand name or goodwill to a manufacturing company); *see also* Emory Univ. v. Nova Biogenics, Inc., No. 1:06-CV-0141, 2008 WL 2945476, at *5 (N.D. Ga. 2008) (stating that negative effects from infringement on goodwill and prestige are real).

⁶⁶Sections III.A and B, *supra*.

⁶⁷See, e.g., z4 Techs., Inc. v. Microsoft Corp., 434 F. Supp. 2d 437, 440-41 (E.D. Tex. 2006). The patented technology was a small component of the infringing product and unrelated to the product's core functionality. The court concluded that the patent holding company patentee would not suffer irreparable harm because the only entity it was prevented from licensing in the future was the defendant. *Id.* See

This is not to say, however, that courts should assume all manufacturing patentees will suffer irreparable harm from infringement. While that might often be the case, the analysis must consider other facts, including the relationship of the patented invention to the infringing product and the structure of the relevant market.⁶⁸ Some courts have assumed that where parties compete, infringement necessarily erodes market price and causes the patentee to lose market share.⁶⁹ If there are only two competitors in a market, then infringement is more likely to lead to price and market effects. However, the patent may cover a minor component of the infringing product, and competing products may include non-infringing alternatives that are acceptable to customers. In that case, it is less likely that the infringement (as opposed to competition generally provided by the infringer) is harming the patentee.⁷⁰

The variety and complexity of factual scenarios discussed here caution against creating any assumptions of irreparable harm based on a finding of infringement,⁷¹ a patentee's use of the patent, or its willingness to license. A careful consideration of the nature of the patented invention, the infringing use, and competition in the relevant market may be required.

Recommendation. Courts should not presume irreparable harm based on a finding of infringement or the patentee's use of the patent. Conversely, courts should recognize that infringement can irreparably harm the ability of patentees

also Paice, LLC v. Toyota Motor Corp., No. 2:04-CV-211, 2006 WL 2385139, at *5 (E.D. Tex. 2006) (injunction denied to licensing company plaintiff where the patented product was a small component of the infringing device), *aff'd in part, vacated in part and remanded*, 504 F.3d 1293 (Fed. Cir. 2007).

⁶⁸IGT v. Bally Gaming Int'l, Inc., 675 F. Supp. 2d 487, 489-90 (D. Del. 2009) (injunction denied where market contained more than two competitors and court required more than a summary overview of the competitive landscape to find irreparable harm), *aff'd in part, vacated in part and remanded*, 508 F.3d 1293 (Fed. Cir. 2007).

⁶⁹Springman at 35 (2/12/09); Malin at 12-13 (2/12/09). *See, e.g.*, Brooktrout, Inc. v. Eicon Networks Corp., No. 2:03-CV-59, 2007 WL 1730112, at *1 (E.D. Tex. 2007) ("intellectual property is quite valuable when it is asserted against a competitor in the plaintiff's market").

⁷⁰*See, e.g.*, Sundance, Inc. v. DeMonte Fabricating, Ltd., No. 02-73543, 2007 WL 37742, at *2 (E.D. Mich. Jan. 4, 2007) (injunction denied where court did not find irreparable harm because the market included many competitors who produced products that did not contain the patented feature). See Chapter 5 for a discussion of the effect of non-infringing alternatives on market analysis.

⁷¹*eBay*, 547 U.S. at 391 ("plaintiff must demonstrate: (1) that it has suffered an irreparable injury . . ."). Moreover, equity places the burden of proving irreparable harm on the party seeking an injunction as the one with easiest access to the relevant information. *See* Springman at 121 (2/12/09) (evidence of irreparable harm is typically in the hands of the patentee and presumptions should be structured to encourage disclosure).

that primarily engage in technology transfer through licensing to compete in a technology market.

B. Balance of the Equities and Hardships Between the Parties

Under this factor, courts must consider the effect of an injunction on an infringer and balance it against the harm that infringement imposes on the patentee.⁷² Commentators have stated that, “the equitable approach is a safety valve for those situations in which someone who is otherwise a good candidate for getting an injunction – such as a patentee whose patent has been infringed – should not get one because of some glaring injustice.”⁷³ But this factor also allows courts to consider whether an injunction would subject the infringer to hold-up because it is “locked-in” to using the patented technology due to high switching costs or compatibility concerns.⁷⁴ The expense and harm to an infringer facing hold-up can be weighed against the harm to the patentee by considering the criteria discussed above. The balance will tend to tip toward the infringer when the invention is a component of a downstream product accounting for a relatively small portion of the product’s value, and when designing around the infringing product *ex post* is more costly than it would have been *ex ante*. In addition, the infringer must not have copied the invention.⁷⁵

Some courts have dismissed infringers’ complaints of hardship by stating that “[o]ne who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business.”⁷⁶ The quote originates from a

⁷²*eBay*, 547 U.S. at 391 (“plaintiff must demonstrate . . . (3) that considering the balance of hardships between the plaintiff and defendant, a remedy in equity is warranted”); *cf. Acumed, LLC v. Stryker Corp.*, 551 F.3d 1323, 1330 (Fed. Cir. 2008) (“[a]s a preliminary matter, the balance considered is only between a plaintiff and a defendant”).

⁷³*Kieff & Smith, supra* note 43, at 68-69 (requiring a “grossly disproportionate hardship on the defendant” to deny an injunction); *see also* Smith at 106 (2/12/09) (balance of hardships and public interest factors are equitable safety valves).

⁷⁴*Hynix Semiconductor, Inc. v. Rambus, Inc.*, 609 F. Supp. 2d 951, 984-85 (N.D. Cal. 2009) (denying injunction, in part due to lock-in); *Badenoch* at 88 (2/12/09) (courts should evaluate the impact of an injunction due to the defendant’s sunk costs); *Su* at 118 (2/12/09) (courts should require greater impact on the infringer’s business than merely that which remedies the infringement, such as hold-up).

⁷⁵*See, e.g., Schlicher Comment* at 34 (5/15/09) (One criteria necessary for denying an injunction is that “the infringer has made large investments . . . necessary to produce any product . . . and those investments . . . are large relative to the value of the patented invention.”).

⁷⁶*3M Innovative Properties Co. v. Avery Dennison Corp.*, No. 01-1781, 2006 WL 2735499, at *2 (D. Minn. 2006); *Johns Hopkins*, 513 F. Supp. 2d at 586 (“the hardship for loss of sales and for ceasing operations is not sufficient because they are direct consequences of the illegal patent infringement”); *Smith & Nephew, Inc. v. Synthes*, 466 F. Supp. 2d 978, 983 (W.D. Tenn. 2006) (“Although Synthes’

1986 Federal Circuit case that predates *eBay*.⁷⁷ As one district court recently explained, reliance on the quote in modern injunction analysis is inappropriate: “[t]o ignore harm to the infringer because it cannot be heard to complain runs contrary to *eBay*’s mandate to consider the balance of hardships between the plaintiff and defendant.”⁷⁸ In the interest of equity, courts should limit the quotation’s relevance to those instances where an infringer truly “elects” to infringe by copying patented technology with knowledge of the patent.⁷⁹ Given the notice problems and uncertainty endemic in some sectors of the patent system, it is inaccurate to assume that many infringers “elect” to infringe, and formulating injunction policy on the assumption that they do threatens to make the remedy punitive rather than equitable.⁸⁰ Doing so can lead to hold-up, overcompensate patentees and harm consumers through higher prices and decreased innovation.

Recommendation. Courts should consider the hardship of an infringer facing hold-up under this prong. Courts should reject the statement that an infringer “cannot be heard to complain if an injunction against continuing infringement destroys the business,”⁸¹ except in those instances where an infringer “elects” to infringe by copying a patented invention with knowledge of the patent.

C. Public Interest

Under the public interest factor, courts must examine the effect an injunction would have on third parties, including the public at large.⁸² In the past, courts denied injunctions “in rare instances” to protect the public interest where an injunction would have serious consequences for

effort, time, and expense in redesigning [the infringing product] might be significant, that is the consequence of patent infringement.”); *see also* Su at 86 (2/12/09) (courts not sympathetic to arguments that equity should save people from hardship they have created).

⁷⁷Windsurfing Int’l, Inc. v. AMF, Inc., 782 F.2d 995, 1003 n.12 (Fed. Cir. 1986) (“One who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected.”).

⁷⁸*Hynix*, 609 F. Supp. 2d at 970.

⁷⁹*Id.*

⁸⁰*See* Badenoch at 79-80 (2/12/09) (arguing that boundaries of patents are uncertain, making injunction punitive where defendants independently developed product and incurred sunk costs).

⁸¹*E.g.*, 3M Innovative Properties Co. v. Avery Dennison Corp., No. 01-1781, 2006 WL 2735499, at *2 (D. Minn. Sept. 25, 2006).

⁸²*eBay*, 547 U.S. at 391 (“plaintiff must demonstrate . . . (4) that the public interest would not be disserved by a permanent injunction”).

public health and safety.⁸³ Since *eBay*, a few courts have appropriately broadened the scope of the public interest concerns to include computer security and other burdens that would be borne by the broader public.⁸⁴

Courts often cite the public's interest in "a strong patent system" as supporting an injunction,⁸⁵ but a more nuanced approach recognizing that the public has a strong interest in a patent system that best promotes innovation is needed. As discussed above, such a patent system will very often award injunctions to patentees. But in some circumstances, including those involving hold-up based on a patent for a minor component, an injunction could distort competition with unpatented technology, overcompensate the patentee, unduly raise prices to consumers and undermine rather than promote innovation.

Recommendation. When warranted by the facts, courts should consider the public's interest in avoiding patent hold-up, which can increase costs and deter innovation.

Panelists and commentators worried that courts might expand the notion of public interest to include the benefit of lower prices, especially for medicines.⁸⁶ For instance, one panelist described the public interest factor as a "wild card" that could raise a series of welfare balancing

⁸³Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1547 (Fed. Cir. 1995) ("courts have in rare instances exercised their discretion to deny injunctive relief in order to protect the public interest."); City of Milwaukee v. Activated Sludge, Inc., 69 F.2d 577 (7th Cir. 1934) (overturning permanent injunction on operation of sewage plant based on public health concerns).

⁸⁴See, e.g. Broadcom v. Qualcomm, Inc., 543 F.3d 683, 704 (Fed. Cir. 2008) (delaying start of injunction on cell phone because immediate injunction would adversely affect public, network carriers and handset manufacturers); Finjan Software, Ltd. v. Secure Computing Corp., No. 06-369, 2009 WL 2524495, at *11 (D. Del. Aug. 18, 2009) (considering effect of injunction on computer security and service disruptions but finding insufficient evidence to outweigh public interest in a strong patent system), *aff'd in part, rev'd in part and remanded*, 626 F.3d 1197 (Fed. Cir. 2010); Amgen, Inc. v. F. Hoffman-La Roche, Ltd., 581 F. Supp. 2d 160, 212-26 (D. Mass. 2008), *aff'd in part*, 580 F.3d 1340 (Fed. Cir. 2009) (evaluating whether injunction could increase drug prices for government health programs).

⁸⁵Appendix B, Section III.C; *see also*, Telequip Corp. v. Change Exchange, No. 5:01-CV-1748, 2006 WL 2385425, at *2 (N.D.N.Y. Aug. 15, 2006) ("without the right to obtain an injunction, the right to exclude granted to the patentee would have only a fraction of the value it was intended to have, and would no longer be as great an incentive to engage in the toils of scientific and technological research"); Zen Design Group, Ltd. v. Clint, No. 08-cv-14309, 2009 WL 4050247 (E.D. Mich. Nov. 23, 2009) (denial of injunction would disincentivize scientific progress).

⁸⁶Ware at 199-200 (evaluating price competition under the public interest prong is contrary to the grant of exclusivity inherent in the patent); Am. Intell. Property Law Ass'n Comment at 4 (5/18/09).

decisions, comparing the benefits of patent exclusivity versus cheaper drugs.⁸⁷ Beyond the circumstances of hold-up that can raise prices by distorting competition with unpatented technology, or extreme circumstances where pricing affects public safety, the public's interest in lower-priced goods generally should not influence the injunction analysis. In enacting the Patent Act, Congress made the judgment that an exclusive right, through its ability to allow patentees to charge higher prices, encourages innovation to the public benefit. Courts should not second-guess that judgment as a general matter.⁸⁸

D. Injunction Analysis in the Standard Setting Context

Hold-up in the standard setting context can be particularly acute. Standards often are adopted to make products compatible and interoperable with other products in the industry.⁸⁹ "Lock-in" can make an entire industry susceptible to hold-up. In addition to higher prices and other economic harms, hold-up in standards-based industries may discourage standard setting activities and collaboration, which can delay innovation.⁹⁰

eBay provides a framework for evaluating whether to issue an injunction in the standard setting context. The balance of hardships and public interest factors of the injunction analysis allows district courts to consider the effects of hold-up resulting from assertion of a patent against a standard. The infringer may face significant hardship as a result of an injunction if it is impossible to participate effectively in the market without complying with the standard. Design-around, at any cost, may not be an option. In that case, and where the patent covers a minor feature of the product for which alternatives existed at the time the standard was set, the balance

⁸⁷Springman at 121-24 (2/12/09).

⁸⁸See U.S. CONST. art. I, § 8; *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 150-51 (1989) (the patent system embodies a carefully crafted bargain for encouraging new and non-obvious advances in technology in return for exclusive rights for a period of years).

⁸⁹Krall at 134-35 (3/18/09) (standard setting is critical to ensure interoperability and interchangeable products); *see* Chapter 7, Section III.C.

⁹⁰U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, ANTITRUST ENFORCEMENT AND INTELLECTUAL PROPERTY RIGHTS: PROMOTING INNOVATION AND COMPETITION at 35 (2007); Farrell *et al.*, *supra* note 55, at 616.

of hardships may support denial of the injunction.⁹¹ A prior RAND⁹² commitment can provide strong evidence that denial of the injunction and ongoing royalties will not irreparably harm the patentee.⁹³ The public interest factor may also consider whether grant of an injunction would deprive consumers of interoperable products and threaten to undermine the collaborative innovation that can result from the standard setting process.⁹⁴

Recommendation. Courts should give careful consideration under each of *eBay*'s four factors to the consequences of issuing an injunction prohibiting use of patented technology incorporated into an industry standard. Whether the patent owner made a RAND commitment will also be relevant to the injunction analysis.

VI. REMEDIES FOLLOWING DENIAL OF AN INJUNCTION

A. Ongoing Royalties

When the *eBay* analysis leads a court to deny an injunction, the question naturally arises of what remedy to apply. The court opinions that address the question most commonly require ongoing royalties that allow the manufacturer to continue making the infringing product. The Federal Circuit has held that this remedy can be appropriate in lieu of an injunction. In doing so, the court distinguished ongoing royalties from a compulsory license: “[t]he term ‘compulsory license’ implies that anyone who meets certain criteria has congressional authority to use that

⁹¹Hynix Semiconductor, Inc. v. Rambus, Inc., 609 F. Supp. 2d 951, 984-85 (N.D. Cal. 2009) (finding balance of hardships favored infringer where injunction on patent asserted against semiconductor memory standard would “decimate” infringer’s business); *but see* TruePosition, Inc. v. Andrew Corp., 568 F. Supp. 2d 500, 532-33 (D. Del. 2008) (evaluating harm to infringer due to standard lock-in, but declining to find balance of hardship favored infringer because of lack of evidence), *aff’d*, 389 Fed. Appx. 1000 (Fed. Cir. 2010).

⁹²Many standard setting organizations require that participants agree to license patents on RAND (Reasonable and Non-Discriminatory) terms. *See* Chapter 7, Section III.C.

⁹³Some have argued that the RAND commitment should bar the patentee from seeking an injunction and that disputes over licensing rates should be resolved through contract litigation over the RAND amount. Joseph Miller, *Standard Setting, Patents and Access Lock-In: RAND Licensing and the Theory of the Firm*, 40 INDIANA L. REV. 351, 358 (2007); Mark A. Lemley, *Intellectual Property Rights and Standard-Setting Organizations*, 90 CAL. L. REV. 1889, 1902, 1925 (2002).

⁹⁴Concerns that industry members will litigate rather than license absent a credible injunction threat diminish with the realization that past and ongoing damages following litigation will be based on a patent known to be valid and infringed, and therefore higher than pre-litigation royalties. *See* Chapter 6, Section IV.B and Chapter 8, Section VI.

which is licensed . . . By contrast, the ongoing royalty order at issue here is limited to one particular set of defendants.”⁹⁵

No consensus on how to set the royalty rate has emerged from the case law, however. The Federal Circuit has stated that district courts must articulate a reasonable basis for determining the amount, and that the award should account for the changed relationship of the parties resulting from an adjudicated finding of infringement of a valid patent.⁹⁶ In most cases, the judge rather than the jury has determined the rate because the relief is equitable rather than legal.⁹⁷ In some cases, district courts have used the royalty rate for past damages as the royalty rate for ongoing damages.⁹⁸ In others, courts have set different royalties, at times based in part on the jury’s award.⁹⁹

The Federal Circuit has encouraged district courts to allow parties to negotiate a license themselves before imposing one.¹⁰⁰ Although this approach may be a wise use of judicial resources, parties are more likely to have similar expectations that allow them to reach agreement if the legal rules for calculating the ongoing royalty are clear. The lack of clarity regarding

⁹⁵Paice, LLC v. Toyota Motor Corp., 504 F.3d 1293, 1313 n.13 (Fed. Cir. 2007), *remanded*, 609 F. Supp. 2d 620 (E.D. Tex. 2009).

⁹⁶*Id.* at 1314-15 (“court may want to take additional evidence . . . to account for any additional economic factors”); *see also* Amado v. Microsoft Corp., 517 F.3d 1353, 1362 (Fed. Cir. 2008) (considering damages for infringement during stay of injunction pending appeal).

⁹⁷*Id.* at 1315-16 (Seventh Amendment does not require jury to determine ongoing royalty); Cummins-Allison Corp. v. SBM Co., Ltd., No. 9:07CV196, 2008 WL 4768028 (E.D. Tex. Nov. 3, 2008) (court calculated royalty for post-verdict infringement); *but cf.* Ariba, Inc. v. Emptoris, Inc., 567 F. Supp. 2d 914 (E.D. Tex. 2008) (court issued pre-trial order stating it would consider sending the question of future damages to the jury).

⁹⁸Voda v. Cordis Corp., No. 03-1512, 2006 WL 2570614, at *6 (W.D. Okla. Sept. 5, 2006), *aff’d*, 536 F.3d 1311 (Fed. Cir. 2008) (judge imposed same royalty rate for future infringement as for past damages); Finisar Corp. v. DirecTV Group, No. 1:05-CV-264, 2006 U.S. Dist. LEXIS 76380, at *5 (E.D. Tex. July 7, 2006) (same), *aff’d in part, rev’d in part*, 523 F.3d 1323 (Fed. Cir. 2008).

⁹⁹Paice, LLC v. Toyota Motor Corp., 609 F. Supp. 2d, 620, 623-24 (E.D. Tex. 2009) (on remand, recalculated ongoing royalty using *Georgia-Pacific* factors); Creative Internet Advertising Corp. v. Yahoo!, Inc., 674 F. Supp. 2d 847, 861 (E.D. Tex. 2009) (judge calculated royalty based on increase over jury determined rate); Boston Scientific Corp. v. Johnson & Johnson, No. 02-00790, 2009 WL 975424, at *5-7 (N.D. Cal. April 9, 2009); (court reapplied *Georgia-Pacific* factors with different weights when calculating the ongoing royalty).

¹⁰⁰Paice, 504 F.3d at 1314-15. *See also* Telcordia Tech., Inc. v. Cisco Systems, Inc., 592 F. Supp. 2d 727, 748 (D. Del. 2009) (ordering parties to negotiate a license); Hynix, 609 F. Supp. 2d at 986-87 (same).

ongoing royalty determinations impedes the efficiency of the voluntary settlements that the Federal Circuit seeks to promote.¹⁰¹

To form a coherent remedies system, the legal rules governing ongoing royalties must be consistent with the rationale that supported denying the injunction in the first place. As discussed above, that rationale may consider problems of hold-up that enable patentees that assert patents ex post to extract royalties based on the sunk investment of the infringer. When a court denies an injunction to ensure that the patentee cannot use the threat of injunction to extract more than the market reward for its inventive contribution,¹⁰² it stands to reason that the ongoing royalty should align with that market reward. Although the ongoing royalty need not be identical to the royalty awarded for past damages,¹⁰³ like reasonable royalty damages, it should be based on a willing licensor/willing licensee model, with the assumption that the patent is valid and infringed.¹⁰⁴ Royalties incorporating the knowledge that a patent is valid and infringed account for the changed relationship of the parties following litigation.

Some commentators and panelists advocated that courts not grant the infringer an ongoing license and royalty after denying an injunction, but instead treat the infringer's future use of the invention as willful infringement, subject to treble damages.¹⁰⁵ Others suggested that ongoing royalties must be very high compared to damages for past infringement. They explained that this would serve as a deterrent to future infringement and provide the patentee with greater

¹⁰¹Meyer at 107-08 (2/12/09) (calculation of ongoing royalties is "an open question"); O'Brien at 258 (5/5/09).

¹⁰²See Chapter 4, at 142 n.3 and accompanying text (defining market reward as amount the invention could command when competing with alternative technologies prior to costs being sunk).

¹⁰³Some panelists suggested that the hypothetical negotiation for determining ongoing royalties take into account the known commercial success of the invention at the time of trial. A hypothetical negotiation for calculating past damages is conducted at the time infringement began and would not necessarily incorporate this knowledge. Rhodes at 223-25 (2/12/09); Layne-Farrar at 132 (2/12/09) (courts should not entrench hold-up, but should also take into account the risk of commercial success that may have existed at different points in time).

¹⁰⁴Chapter 6, Section IV (discussing how the hypothetical negotiation model seeks to replicate the market reward for the invention); *see also* Badenoch at 130-31 (2/12/09) (supporting use of the royalty for past damages as the ongoing royalty); Lemley at 253 (5/5/09) ("It seems to me if we get the damages rules right for retrospective damages, those damages rules are just right as prospectively if we've decided that injunctive relief is not appropriate.").

¹⁰⁵Ware at 225-26 (2/12/09); Bernard H. Chao, *After eBay Inc. v. MercExchange: The Changing Landscape for Patent Remedies*, 9 MINN. J.L. SCI. & TECH. 543, 568-69 (2008).

leverage in post-verdict licensing negotiations.¹⁰⁶ But such an approach would only recreate the hold-up problem that denial of the injunction was meant to avoid.¹⁰⁷ Concerns about preserving the deterrent value of injunctions and the patentees' incentives to innovate are best addressed by carefully defining and limiting the circumstances under which injunctions are denied.

Recommendation. The Commission recommends that to fully compensate patentees but avoid creating hold-up, courts base awards of ongoing royalties following denial of an injunction on the willing licensor/willing licensee model, assuming the patent is valid and infringed.

B. Delaying the Injunction

Courts do not always award ongoing royalties for the life of the patent. In several instances, courts have granted the permanent injunction but delayed its start in order to give the infringer time to design around the patent, or the parties time to reach a licensing agreement. An ongoing royalty will generally run until the injunction takes effect. For instance, the Federal Circuit recently affirmed a district court's grant of an injunction but extended the delay for its start from sixty days to five months.¹⁰⁸ The Federal Circuit has also indicated that a delayed injunction can be an appropriate method to mitigate harm to the defendant and the public.¹⁰⁹

Where a design-around option is feasible and the infringer is afforded sufficient time to implement it, a delayed injunction can be a useful tool to prevent hold-up while avoiding the concerns associated with denying injunctions for the life of the patent. In addition to giving the infringer an opportunity to design around the patent, which promotes innovation, a delayed-start injunction allows the parties to bargain in light of the design-around alternative and reach a royalty that reflects competition. This can enable inadvertent infringers to minimize some of the potentially most serious costs associated with ex post patent assertions described in Chapter 2.

¹⁰⁶Golden at 110-11 (2/12/09) ("if you crank up the damages high enough or multiply it high enough, it effectively works in many ways like an injunction").

¹⁰⁷See Lemley at 270 (5/5/09).

¹⁰⁸j4i Ltd. Partnership v. Microsoft Corp., 598 F.3d 831, 863-64, 1276-78 (Fed. Cir.), *cert. granted*, 79 U.S.L.W. 3326 (U.S. Nov. 29, 2010) (No. 10-290).

¹⁰⁹Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295, 1311 n.12 (Fed. Cir. 2007) ("One factor that is relevant to the balance of the hardships required by the Supreme Court's decision in *eBay* was not considered by the district court, namely whether the district court should have allowed time for Vonage to implement a workaround that would avoid continued infringement").

VII. REMEDIES IN THE INTERNATIONAL TRADE COMMISSION

Although all federal district courts must follow the injunction analysis provided by the Supreme Court in *eBay*, the International Trade Commission (“ITC”), another venue in which patentees may litigate, does not. That discrepancy has generated some concern that the ITC may attract suits by patentees that are less likely to obtain injunctions in district court, potentially leading to hold-up and the resulting consumer harm described above.

Patent holders that believe that imported products infringe their patents may file a complaint with the ITC under Section 337 of the Tariff Act of 1930. That statute prohibits methods of unfair competition from imported goods, including patent infringement.¹¹⁰ Jurisdiction is *in rem* over the imported goods, which allows patentees to bring cases against foreign defendants who might otherwise be outside the jurisdiction of U.S. district courts.¹¹¹ After finding patent infringement, the ITC may issue a cease and desist order and an exclusion order. A cease and desist order prohibits a defendant from selling infringing imported articles out of U.S. inventory.¹¹² An exclusion order, which can be either general or limited, directs the U.S. Customs service to bar articles from entry into the United States.¹¹³ The ITC cannot award monetary damages for past infringement.

Use of the ITC as a venue for patent challenges has tripled in the last ten years.¹¹⁴ Sixty-five percent of those cases proceed simultaneously in federal district court. Expanded use of the ITC and the parallel proceedings in the district courts have led some commentators to raise concerns about inconsistent results in individual cases and incoherent development of patent policy.¹¹⁵ One area of particular interest is the different remedial standards applied in the ITC

¹¹⁰19 U.S.C. § 1337(a)(1)(A)-(B).

¹¹¹Donald K. Duvall *et al.*, *UNFAIR COMPETITION AND THE ITC: ACTIONS BEFORE THE INTERNATIONAL TRADE COMMISSION UNDER SECTION 337 OF THE TARIFF ACT OF 1930* § 2:20 (Philip J. McCabe & John W. Bateman eds., 2007).

¹¹²19 U.S.C. § 1337(f).

¹¹³Limited exclusion orders block importation of infringing articles by “persons determined by the Commission to be violating” Section 337. General exclusion orders ban the importation of any infringing goods, but they are available only in narrow circumstances. 19 U.S.C. § 1337(d)(1), (2); *Kyocera Wireless Corp. v. Int’l Trade Comm’n*, 545 F.3d 1340, 1356-58 (Fed. Cir. 2008).

¹¹⁴Colleen V. Chien, *Patently Protectionist? An Empirical Analysis of Patent Cases at the International Trade Commission*, 50 WM. & MARY L. REV. 63, 68 (2008).

¹¹⁵Sapna Kumar, *The Other Patent Agency: Congressional Regulation of the ITC*, 61 FLA. L. REV. 529 (2009) (describing inconsistencies between federal court decisions and ITC decisions); Robert W. Hahn & Hal J. Singer, *Assessing Bias in Patent Infringement Cases: A Review of International Trade Commission Decisions*, 21 HARV. J.L. & TECH. 457 (2008) (assessing benefits of ITC’s 337 process and

(exclusion orders) and district courts (injunctions). The ITC has held that it may not apply *eBay*'s equitable test when deciding whether to issue an exclusion order because Section 337 "represents a legislative modification of the traditional test in equity . . . [and] it is unnecessary to show irreparable harm to the patentee in the case of infringement by importation."¹¹⁶ The Federal Circuit affirmed the ITC's conclusion that its remedies are governed by statute, and in particular the dictate that it "shall" enter exclusion orders,¹¹⁷ and not by equitable principles.¹¹⁸ Thus, unlike the situation in district court, a finding of infringement in the ITC leads to a nearly automatic exclusion order.¹¹⁹

It is not clear how much of the rise in ITC litigation is caused by patentees seeking to avoid the *eBay* analysis, however. ITC litigation had been increasing prior to that 2006 decision.¹²⁰ Moreover, patentees often choose to file in the ITC because of the agency's accelerated litigation timetable compared to that of many district courts and the availability of administrative law judges with patent expertise.¹²¹ Nevertheless, panelists worried that patentees might bring suit in the ITC more frequently in the future¹²² in the hope of obtaining exclusion orders in circumstances where injunctions might not have been granted in federal district court.¹²³

bias at the ITC in favor of complainants); Sprigman at 44-45 (2/12/09) (system gives plaintiffs "two bites at the apple"). *But see* Rhodes at 227 (2/12/09) (explaining that parallel district court cases were filed to avoid declaratory judgment actions and were often stayed so that few cases are fully adjudicated in both venues); Chien, *supra* note 114, at 92-95 (reporting that 65% of ITC patent cases had parallel district court cases, but finding very few inconsistent decisions).

¹¹⁶ Certain Baseband Processor Chips and Chipsets, No. 337-TA-543, slip op. at 62-3 n.230 (Int'l Trade Comm'n, June 19, 2007).

¹¹⁷ 19 U.S.C. 1337(d) (stating that if the ITC finds a violation of the statute, "it shall direct that the articles concerned . . . be excluded from entry into the United States" subject to certain public interest analyses).

¹¹⁸ Spansion, Inc. v. Int'l Trade Comm'n, Nos. 2009-1460, 2009-1461, 2009-1462, 2009-1465, 2010 WL 5156992, at *20-22 (Fed. Cir. Dec. 21, 2010) ("Given the different statutory underpinnings for relief before the Commission in Section 337 actions and before the district courts in suits for patent infringement, this court holds that *eBay* does not apply to Commission remedy determinations under Section 337. ").

¹¹⁹ A survey of ITC patent investigations filed between 1995 and 2007 found that the ITC awarded an exclusion order in 100% of the cases in which it found a violation. Chien, *supra* note 114, at 99.

¹²⁰ McDaniel at 119 (5/26/10).

¹²¹ *Id.* at 115, 118-19 (5/26/10).

¹²² Doyle at 254 (5/5/09); Chaikovsky at 254 (5/5/09); Luftman at 227 (2/12/09); Barr at 123 (5/26/10).

¹²³ Administrative law judges of the ITC have issued few opinions that appear to involve patent holding companies since the 2006 *eBay* decision, although more complaints may have been filed. *See* Certain

The 2009 Saxon case, in which a patent assertion entity asserted three patents that it had purchased against several mobile phone manufacturers, raised the specter of “patent troll” suits in the ITC.¹²⁴ Patentees have also asserted patents that are subject to RAND commitments against standardized products in the ITC.¹²⁵

An injunction or exclusion order granted to a patent assertion entity based on infringement of a patent covering a minor component of a complex product poses the risk of generating hold-up that can harm consumers. An injunction or exclusion order against standardized technology also poses a significant risk of hold-up and consumer harm. Although *eBay* provides an important tool for avoiding these outcomes, automatic exclusion orders awarded by the ITC could undermine *eBay*’s value in this regard.¹²⁶

Section 337 provides two mechanisms through which the ITC can limit the incidence of hold-up generated by an exclusion order and the resulting harm to consumers. The first relates to matters brought by patent assertion entities. To file suit in the ITC, a patent owner must establish that “an industry in the United States, relating to the articles protected by the patent . . . exists or is in the process of being established.” That domestic industry requirement can be satisfied by showing “substantial investment in [the patent’s] exploitation, including engineering, research and development or licensing.”¹²⁷ When Congress added this provision to Section 337 in 1988, it explained, “[t]he definition could . . . encompass universities and other intellectual property owners who engage in extensive licensing of their rights to manufacturers The owner of the property right must be actively engaged in steps leading to the exploitation of the intellectual property, including application engineering, design work, or other such activities.”¹²⁸

Electronic Devices, including Handheld Wireless Communications Devices, Nos. 337-TA-673 & 337-TA-667, slip op. at 3 (Int’l Trade Comm’n, October 15, 2009) (“Saxon Case”).

¹²⁴Joe Mullin, *Will the ITC Become the New Troll Hangout?*, THE AM LAW DAILY (January 13, 2009) available at <http://amlawdaily.typepad.com/amlawdaily/2009/01/a-new-troll-hangout.html>. Saxon is an intellectual property licensing company with a portfolio of 180 patents focused on consumer electronics. <http://www.saxoninnovations.com/About.html>. The litigants settled the case. In the Matter of Certain Electronic Devices, including Handheld Wireless Communications Devices, Nos. 337-TA-673 & 337-TA-667, slip op. (Int’l Trade Comm’n, Feb. 12, 2010).

¹²⁵E.g. Certain Gaming and Entertainment Consoles, Related Software, and Components Thereof, USITC Inv. No. 337-TA-752 (Answer of Respondent Microsoft Corp., filed Jan. 26, 2011, at 31-32).

¹²⁶Commentators have highlighted the need to harmonize the remedial standards in the two venues. *See* Chien, *supra* note 114, at 109; Hahn & Singer, *supra* note 115, at 486-90; Kumar, *supra* note 115, at 574-78.

¹²⁷19 U.S.C. § 1337(a)(3). *See also* Duvall et al., *supra* note 111, § 3:16 at 79; § 13.17 at 80.

¹²⁸S. REP. No. 71, 100th Cong., 1st Sess., at 129-30 (1987).

The FTC suggests that the ITC consider interpreting the domestic industry requirement as not satisfied by ex post licensing activity solely focused on extracting rents from manufacturers based on products already on the market. As discussed in Chapters 1 and 2, the differences between the economic consequences of ex ante licensing, which strives for technology transfer and the creation of new products, and ex post licensing, which seeks payment from manufacturers already using the technology, are significant. Section 337 requires an “industry” based on “substantial investment” in “exploitation” of the patent through “licensing.” This language can be interpreted as encompassing ex ante but not ex post licensing because only the former seeks to “exploit” the patent by putting it into productive use to create an industry.¹²⁹ This interpretation of the statute is consistent with the legislative history’s concern with promoting innovation in the United States. Importantly, it will limit access to the ITC of those patent owners most likely to be denied an injunction under the *eBay* analysis propounded above, while allowing access to firms engaged in invention and technology transfer.

Second, Section 337 allows the ITC to consider “the public health and welfare, competitive conditions in the United States economy, the production of like or directly competitive articles in the United States, and United States consumers” in deciding whether to grant an exclusion order.¹³⁰ The ITC has rarely used this provision to deny an exclusion order,¹³¹

¹²⁹In *Certain Coaxial Cable Connectors and Components Thereof and Products Containing the Same*, the ITC held that ex post and ex ante licensing activity “exploited” the patent and could support a domestic industry. The opinion explains that “licensing activities that ‘put [the patent] to productive use,’ i.e., bring a patented technology to market, as well as licensing activities that ‘take advantage of’ the patent, i.e., solely derive revenue,” both qualified as “exploitation” of the patent that could satisfy the domestic industry requirement. *Certain Coaxial Cable Connectors and Components Thereof and Products Containing the Same*, No. 337-TA-650, slip op. at 49-50 (Int’l Trade Comm’n, Apr. 14, 2010) The ITC arrived at this position by relying on the “plain language” of the domestic industry requirement and applying both of two dictionary definitions for “exploit” to the statute: (1) “to put a product to use” and (2) “to take advantage of.” *Id.* at 49 (quoting Webster’s Ninth at 438). However, the availability of multiple dictionary definitions for the statutory term “exploit” could equally well support the reasonableness under *Chevron* of an interpretation based only on the first definition. See *Smiley v. Citibank (South Dakota)*, 517 U.S. 735, 740-47 (1996) (describing different definitions of “interest” and “rate” and finding agency’s interpretation reasonable under *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837 (1984)).

¹³⁰19 U.S.C. § 1337(d)(1).

¹³¹The ITC has used this provision to deny an injunction only three times. *Kumar*, *supra* note 115, at 567-68. Those cases involved issues of public health or broad public interest. See *Fluidized Supporting Apparatus*, USITC Pub. 1967, Inv. No. 337-TA-182 (Oct. 1984) (patents covered beds for burn victims and patentee was unable to meet demand); *Inclined-Field Acceleration Tubes*, USITC Pub. 1119, Inv. No. 337-TA-067 (Dec. 1980) (patents covered devices used in nuclear physics research, including weapons development and other applications funded by the federal government, for which there were no cost effective replacements); *Automatic Crankpin Grinders*, USITC Pub. 1022, Inv. No. 337-TA-060 (Dec. 1979) (patent covered automobile part that was in short supply and that improved fuel efficiency

but its language should allow consideration of how an exclusion order can cause hold-up, raise prices and decrease innovation as the basis for denial. These economic concepts consider “competitive conditions” by comparing the *ex ante* value of the patented technology in a competitive technology market to the *ex post* value due to high switching costs, and the impact of those “competitive conditions” on “United States consumers.” Assertion of a patent against a standard, especially a patent subject to a RAND commitment, creates a particularly important scenario for considering the public interest in deciding whether to grant an exclusion order.¹³² By incorporating these economic concepts into its remedy analysis, the ITC would move that analysis closer to that required in district courts by *eBay*.¹³³

Recommendation The FTC recommends that the ITC consider whether only those licensing activities that promote technology transfer “exploit” patented technology within the meaning of Section 337, and therefore satisfy the domestic industry requirement. The FTC also recommends that the ITC incorporate concerns about patent hold-up, especially of standards, into the decision of whether to grant an exclusion order in accordance with the public interest elements of Section 337.

The instances in which the ITC would deny an exclusion order based on these considerations would be rare, especially if it interpreted the domestic industry requirement as described here. However, that denial would leave the patent holder without an infringement remedy in the ITC because that agency lacks the power to award damages for past infringement or an ongoing royalty for future infringement. Of course, patentees can always seek relief in district court, but this would require relitigation of the liability issues because ITC decisions are not accorded *res judicata* effect in district court.¹³⁴ Potential solutions deserve further study.¹³⁵

during energy crisis).

¹³²Section V.D, *infra*.

¹³³The decisions of the ITC are subject to Presidential review and veto for “policy reasons.” 19 U.S.C. § 1337(j)(2). This presents another mechanism for considering when hold-up and consumer harm warrant denial of an injunction in the ITC.

¹³⁴Tandon Corp. v. Int’l Trade Comm’n, 831 F.2d 1017 (Fed. Cir. 1987); Texas Instr. v. Cypress, 90 F.3d 1558 (Fed. Cir. 1996).

¹³⁵Commentators have also proposed broader statutory changes to further harmonize patent litigation in the ITC and district courts. Chien, *supra* note 114, at 106-11; Hahn & Singer, *supra* note 115, at 486-90 (2008).

VIII. CONCLUSION

The *eBay* injunction analysis is grounded in equity. As such, it allows for a balancing of harms to the patentee, the infringer and the public. That balancing must be undertaken with a full appreciation of how an injunction and threat of an injunction can both further and hinder the patent system's goals. On the one hand, injunctions incentivize innovation, deter infringement and encourage licensing. On the other hand, they can raise the cost and uncertainty of innovation through hold-up. For that reason, the FTC recommends that courts incorporate concerns about hold-up into the *eBay* analysis.

Moreover, an appreciation of the consumer harm from hold-up should extend to a court's design of a remedy following denial of an injunction. The FTC recommends that those remedies be based on the market value of the patented technology compared to alternatives, assuming the patent is valid and infringed. In addition, the FTC recommends that the ITC consider mechanisms that lessen the risk that an ITC exclusion order could generate hold-up, including revisiting the scope of the domestic industry requirement and incorporating competition and innovation concerns into the public interest considerations when granting an exclusion order.

APPENDIX A

STATISTICS DESCRIBING PATENT DAMAGE AWARDS

Several authors have reported statistics describing damages awards by district courts. PricewaterhouseCoopers prepares studies of damage awards annually, the most recent of which covers awards between 1995 and 2009. In a 2007 study, Professors Lemley and Shapiro collected data on reasonable royalty rates from reported cases decided between 1982 to 2005.¹ Professor Janicke and the University of Houston Law Center's Institute for Intellectual Property and Information Law provide a web-based service, Patstats (www.patstats.org), which has collected and reported jury-awarded damages in patent cases since 2005 (and other data since 2000). Some of the results from these research projects are summarized in this appendix.

I. PricewaterhouseCoopers Study

In its 2010 Patent Litigation Study, PricewaterhouseCoopers collected 1,587 district court opinions issued since 1995.² These decisions included final decisions both at summary judgment and after trial on the merits.³ The authors collected these decisions from opinions available in two Westlaw databases and corresponding PACER records.⁴ PricewaterhouseCoopers calculates annual median damage awards for cases reported between 1995 and 2009 (expressed in 2009 dollars). (See Chart 1.) The annual median awards range from \$2.4 million to \$10.5 million, with an overall median award of \$5.2 million during this period.⁵ PricewaterhouseCoopers also provides statistics on win rates, types of award (e.g., reasonable royalty damages), types of plaintiff (e.g., NPE), and types of factfinder (judge or jury).

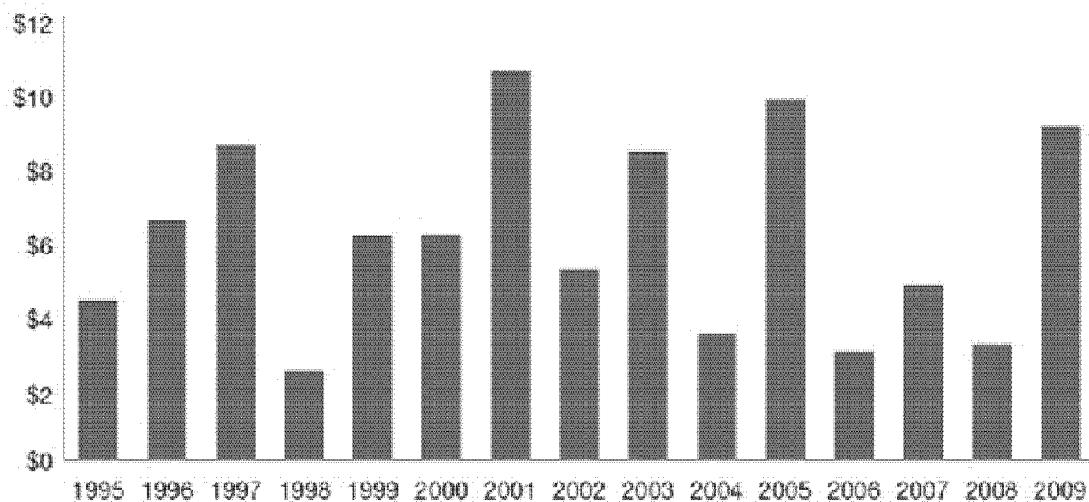
¹Mark A. Lemley & Carl Shapiro, *Patent Holdup and Royalty Stacking*, 85 Tex. L. Rev. 1991, 2029-35 (2007).

²PricewaterhouseCoopers, 2010 Patent Litigation Study, The Continued Evolution of Patent Damages Law: Patent Litigation Trends and the Impact of Recent Court Decisions on Damages, at 26 (Sept. 2010), available at <http://www.pwc.com/us/en/forensic-services/publications/2010-patent-litigation-study.jhtml>.

³*Id.*

⁴*Id.*

⁵*Id.* at 7.

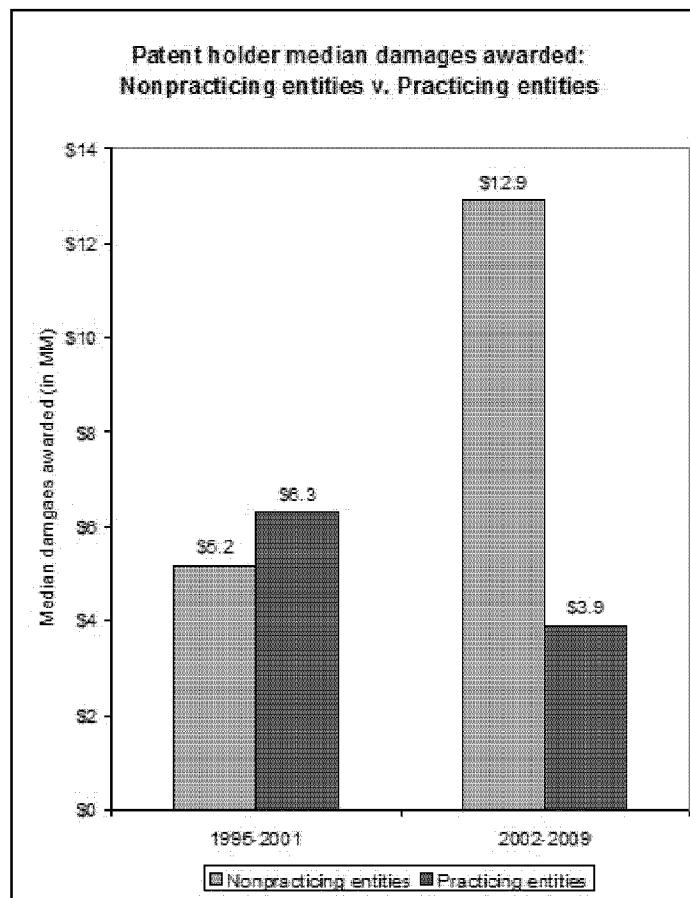
Chart 1⁶**Patent holder median damages awarded (in millions): 1995-2009**

One striking trend reported in the PricewaterhouseCoopers study is the disparity that has arisen between damage awards for non-practicing entities versus practicing entities in recent years. During the 2001-2009 period, the median award to non-practicing entities was \$12.9 million, while the median award to practicing entities was \$3.9 million.⁷ In contrast, during the period 1995-2001, the median damage award for practicing entities exceeded that for non-practicing entities (\$6.3 million versus \$5.2 million).⁸ (See Chart 2.)

⁶*Id.* Chart 2a. Reproduced with permission from the authors.

⁷*Id.*

⁸*Id.*

Chart 2⁹

The PricewaterhouseCoopers study also identifies a shift toward jury trials versus bench trials, with the former accounting for only 14 percent of cases during the 1980s but just over 50 percent since 2000.¹⁰ The authors suggest several factors that may contribute to this trend. They find that patentees have a higher success rate and receive on average higher damage awards in jury trials as compared to bench trials, creating a perception that juries provide more favorable results for patentees.¹¹ Additionally, the study reports an increase in litigation by non-practicing entities, who are more likely than practicing plaintiffs to seek a jury trial.¹²

⁹*Id.* Chart 2b. Reproduced with permission from the authors.

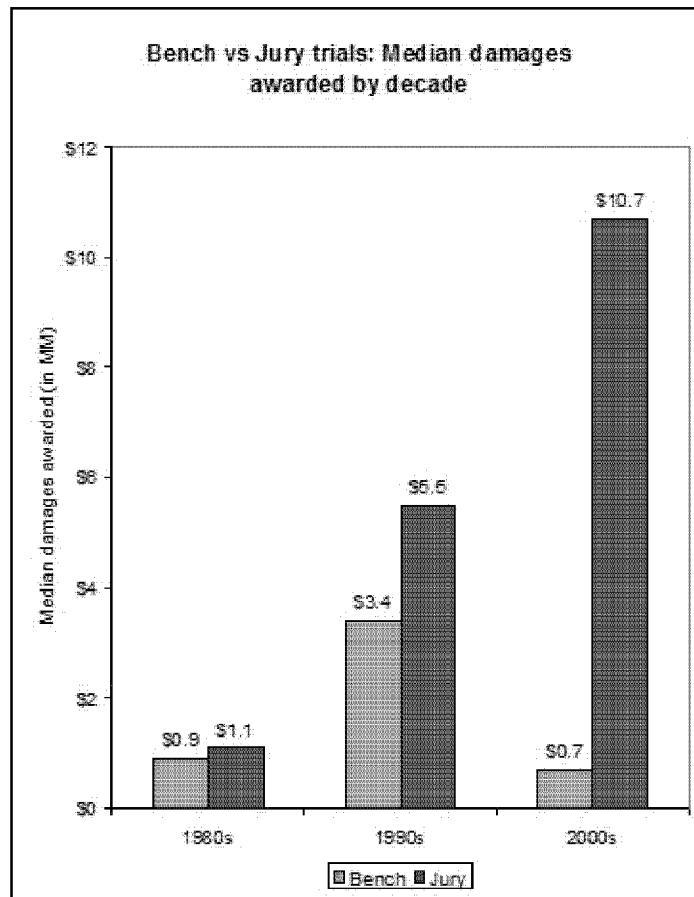
¹⁰*Id.* at 9 & Chart 3a.

¹¹*Id.* at 10.

¹²*Id.*

The PricewaterhouseCoopers study further finds that jury awards substantially exceed awards by judges, as the following two charts reflect.¹³ The first reveals that median damage awards by juries have steadily increased over time and damages awards by judges in bench trials have decreased significantly since 2000, leading to an increasing disparity between them.¹⁴ (See Chart 3.) The second indicates that NPE plaintiffs have obtained substantially higher awards from juries (but not from judges) than have other types of plaintiffs.¹⁵ (See Chart 4.)

Chart 3¹⁶

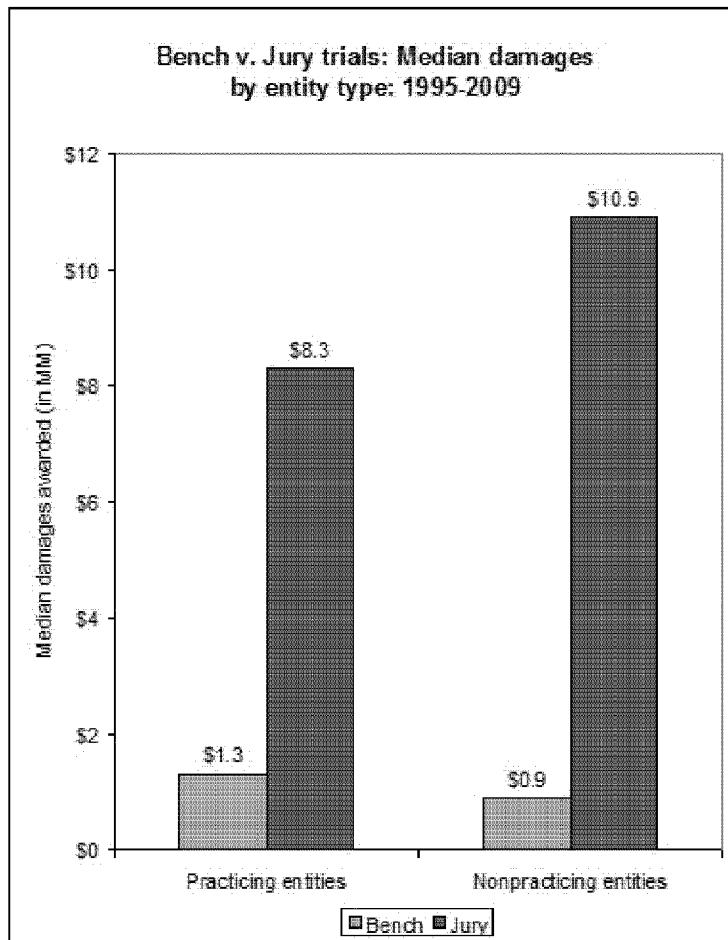


¹³Id. at 11.

¹⁴Id.

¹⁵Id.

¹⁶Id. Chart 3e. Reproduced with permission from the authors.

Chart 4¹⁷

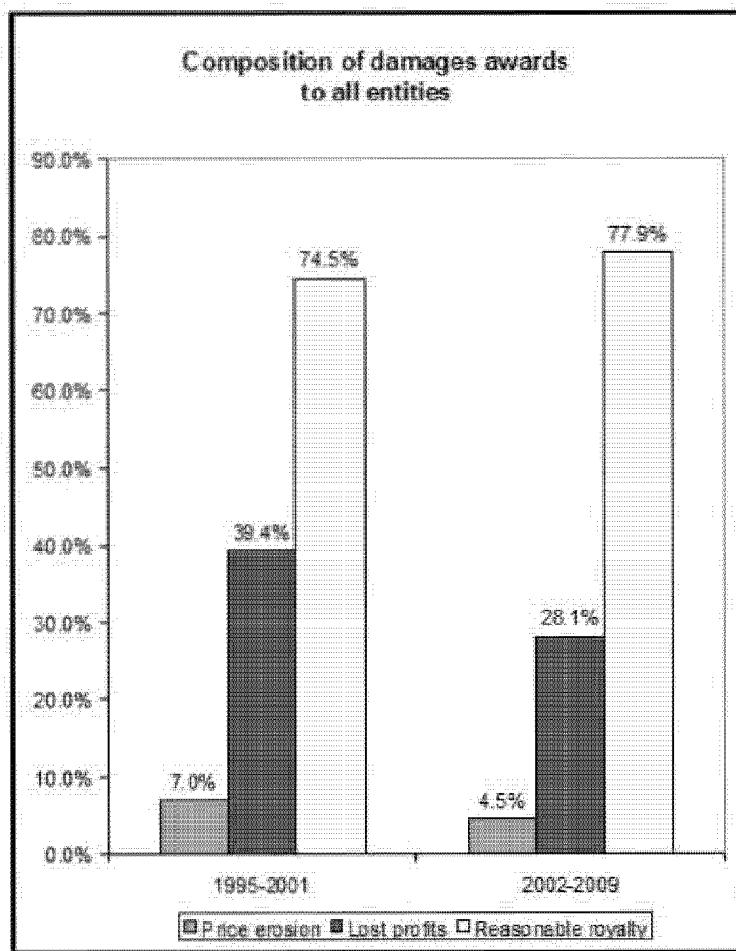
The authors of the PricewaterhouseCooper's study also conclude that reasonable royalty damages continue to be "the most frequent basis of damages awards,"¹⁸ reporting the composition of damages awards for 1995-2001 and 2002-2009. (See Chart 5.) They observe that the expanded importance of reasonable royalties relative to lost profits is in part attributable to the increase in actions by non-practicing entities, which generally cannot recover lost profits.¹⁹

¹⁷Id. Chart 3f. Reproduced with permission from the authors.

¹⁸Id. at 12.

¹⁹Id. at 13.

Chart 5²⁰



²⁰*Id.* at 12 Chart 4. Reproduced with permission from the authors.

II. Lemley and Shapiro Study

Professors Lemley and Shapiro conducted an empirical study of the royalty rates adopted in reasonable royalty damage determinations by surveying reported cases from 1982 to 2005.²¹ They found only 47 written opinions containing sufficient information for them to identify a royalty rate, and point out that judicial damages awards may be overrepresented in the sample relative to jury damages awards.²² Lemley and Shapiro calculate a mean royalty rate for all sampled awards of 13.1% of the price of the infringing product.²³ In contrast, they state that “very few patent licenses negotiated without litigation (or even in settlement of it) result in royalty rates anywhere near that high.”²⁴ Lemley and Shapiro report a mean royalty rate of about 10.0% for claims of infringement of component inventions and a mean rate of 14.7% for claims involving claims of infringement of integrated-product inventions.²⁵ The authors observe that these royalty figures exceed the economy-wide average profit margin over the sample period.²⁶

III. Data Available on PatStats.org

The University of Houston Law Center’s Institute for Intellectual Property and Information Law (“IPLI”) has collected data on patent decisions since 2000, and made the data available on its web site Patstats.²⁷ Since 2005, the Institute has identified jury damage awards in those cases in a spreadsheet available for download from the website.²⁸ These data are limited to the actual amount the jury awarded in its verdict, and do not include interest or fees and are not

²¹ Lemley & Shapiro, *supra* note 1, at 2029-35.

²² *Id.* at 2031. The authors focused on royalty awards disclosed in written judicial opinions – they did not include settlements, awards that they could not clearly identify as reasonable royalty awards, and excluded “pure” jury verdicts. This resulted in a bias toward court opinions; jury awards represented only eight of the opinions in their sample. *Id.* at 2030-31.

²³ *Id.* at 2030-32.

²⁴ *Id.* at 2032-33. Moreover, since the sample is biased toward court awards, which are generally much lower than jury awards, this estimate may be low.

²⁵ *Id.* at 2034.

²⁶ *Id.* at 2035.

²⁷ These data are available on the www.patstats.org website.

²⁸ Patstats.org, U.S. Patent Litigation Statistics, <http://www.patstats.org/Patstats3.html>. The excel spreadsheet is available by clicking on the Jury Patent Damages Verdicts link at <http://www.patstats.org/Patstats2.html>.

adjusted for decisions on post trial motions, appeals or settlements.²⁹ The Patstats website listed 166 jury awards between January 1, 2005 and January 11, 2010, with a median award of \$6.5 million.³⁰ A list of the 166 awards is available on the FTC web site.³¹

²⁹A paper based on this data identified those cases in which either a district court or an appellate court modified the jury verdict for cases decided between 2005 and 2007. *See* Innovation Alliance, *Moving Beyond the Rhetoric: Jury Damage Verdicts in Patent Infringement Cases 2005-2007* (2008), available at <http://www.innovationalliance.net/files/JURY%20DAMAGE%20VERDICTS%20IN%20PATENT%20INFRINGEMENT%20CASES%5B1%5D.pdf>.

³⁰Patstats.org, U.S. Patent Litigation Statistics, <http://www.patstats.org/Patstats3.html>.

³¹*See* Paul Janicke, *Patent Damages, Patent Verdicts from 1-1-05 to 1-6-09*, presented at FTC Hearing: The Evolving IP Marketplace (Feb. 11, 2009), available at <http://ftc.gov/bc/workshops/ipmarketplace/feb11/docs/janicke-medianverdits.pdf>. (Reproduced with permission from Professor Janicke.)

APPENDIX B
OVERVIEW OF POST-*EBAY* PERMANENT INJUNCTION CASE LAW

I. The *eBay* Case

Not long after its creation, the Federal Circuit recognized that the Patent Act “empowers district courts to grant injunctions in accordance with the principles of equity” and that “the district court’s grant or denial of an injunction is within its discretion depending on the facts of each case.”¹ In 1989, however, the Federal Circuit established a “general rule” in favor of granting injunctions based on a presumption of irreparable harm:

Infringement having been established, it is contrary to the laws of property, of which the patent law partakes, to deny the patentee's right to exclude others from use of his property. The right to exclude recognized in a patent is but the essence of the concept of property. It is the general rule that an injunction will issue when infringement has been adjudged, absent a sound reason for denying it. . . . In matters involving patent rights, irreparable harm has been presumed when a clear showing has been made of patent validity and infringement.²

Overcoming this general rule required a significant showing of public harm in order to outweigh the irreparable harm presumed to be caused by infringement.³ The Supreme Court’s *eBay* decision corrected that analysis, however.

In the original action, MercExchange sued eBay and Half.com for infringing two patents relating to on-line sales.⁴ The jury returned a verdict of willful infringement and awarded damages of \$35 million. The district court denied the patentee’s motion for a permanent injunction even though it recognized that injunctive relief was “considered the norm.”⁵ In reaching that decision, the court pointed to evidence that the patentee, a licensing company, did

¹Windsurfing Int’l, Inc. v. AMF, Inc., 782 F.2d 995, 1002 (Fed. Cir. 1986) (*citing* Roche Products, Inc. v. Bolar Pharmaceutical Co., 733 F.2d 858, 865-66, (Fed. Cir. 1984)).

²Richardson v. Suzuki Motor Corp., 868 F.2d 1226, 1246-47 (Fed. Cir. 1989) (citations omitted).

³Rite-Hite Corp. v. Kelley Co., 56 F.3d 1538, 1547 (Fed. Cir. 1995) (en banc) (“Accordingly, courts have in rare instances exercised their discretion to deny injunctive relief in order to protect the public interest.”).

⁴MercExchange, LLC v. eBay, Inc., 275 F. Supp. 2d 695 (E.D. Va. 2003) (“*eBay I*”), *aff’d in part, rev’d in part*, 401 F.3d 1323 (Fed. Cir. 2005), *vacated and remanded*, 547 U.S. 388 (2006).

⁵*Id.* at 711.

not practice its inventions, had licensed its patents in the past, and had made statements to the media that it was willing to license eBay. The court also explained that the “public does not benefit from a patentee who obtains a patent yet declines to allow the public to benefit from the inventions contained therein.”⁶

On appeal, the Federal Circuit reversed the denial of permanent injunction on the grounds that the district court had not provided a persuasive showing that the case is “sufficiently exceptional.”⁷ The court reiterated the general rule that a permanent injunction will issue unless a “patentee’s failure to practice the patented invention frustrates an important public need for the invention such as the need to use an invention to protect public health.”⁸ It rejected the district court’s concern that MercExchange did not practice the patents: “Injunctions are not reserved for patentees that intend to practice their patent, as opposed to those who choose to license. The statutory right to exclude is equally available to both groups, and the right to an adequate remedy to enforce that right should be equally available to both as well.”⁹ Finally, the appellate court stated, “[i]f the injunction gives the patentee additional leverage in licensing, that is the natural consequence of the right to exclude and not an inappropriate reward to a party that does not intend to compete in the marketplace. . . .”¹⁰

In 2006, a unanimous Supreme Court rejected both the Federal Circuit’s general rule supporting the grant of an injunction and the district court’s “expansive principles” suggesting that a patentee who did not practice its invention and was willing to license could not obtain an injunction.¹¹ Instead, relying on the express language of the Patent Act, which provides that district courts “may” issue injunctions “in accordance with the principles of equity,” the Court looked to “traditional equitable principles.” The Court listed four equitable factors that a patentee, no different from any other plaintiff, must satisfy to obtain an injunction:

A plaintiff must demonstrate: (1) that it has suffered an irreparable injury; (2) that remedies available at law, such as monetary damages, are inadequate to compensate for that injury; (3) that, considering the balance of hardships between the plaintiff and

⁶*Id.* at 714.

⁷*MercExchange, LLC v. eBay, Inc.*, 401 F.3d. 1323, 1338 (Fed. Cir. 2005) (“*eBay II*”), *vacated and remanded*, 547 U.S. 388 (2006).

⁸*Id.* at 1338 (citations omitted).

⁹*Id.* at 1339.

¹⁰*Id.*

¹¹*eBay*, 547 U.S. at 393.

defendant, a remedy in equity is warranted; and (4) that the public interest would not be disserved by a permanent injunction.¹²

Chief Justice Roberts' concurring opinion, joined by Justices Scalia and Ginsburg, cautioned that a major departure from the long tradition of equity practice should not be lightly implied. Courts have granted injunctive relief in the vast majority of patent cases, they explained, due to the difficulty of protecting a patentee's right to exclude others from using the invention through monetary damages.¹³

Justice Kennedy's concurring opinion, joined by Justices Stevens, Souter and Breyer, however, did suggest situations in which district courts may find injunctive relief inappropriate. Citing the FTC's 2003 IP Report,¹⁴ Justice Kennedy noted the development of a business model in which non-practicing entities obtain patents primarily to garner license fees, not to practice the inventions. "For these firms, an injunction, and the potentially serious sanctions arising from its violation, can be employed as a bargaining tool to charge exorbitant fees to companies that seek to buy licenses to practice the patent."¹⁵ In addition, Justice Kennedy suggested that situations in which the patented invention is "but a small component of the product the companies seek to produce" may also be inappropriate for injunctive relief because "the threat of an injunction is employed simply for undue leverage in negotiations."¹⁶ On remand, the district court again declined the patentee's request for an injunction.¹⁷

II. Statistics on Post-*eBay* Cases

After enumerating the four equitable factors in the *eBay* decision, the opinion of the full Court gave little guidance on their application. That, and the divergent emphasis of the two concurring opinions, created significant uncertainty concerning the circumstances under which courts would deny permanent injunctions in patent cases immediately following issuance of the

¹²*Id.* at 391.

¹³*Id.* at 395 (Roberts, C. J., concurring) (explaining that the "long tradition of equity practice is not surprising, given the difficulty in protecting a right to *exclude* through monetary remedies that allow an infringer to *use* an invention against the patentee's wishes - a difficulty that often implicates the first two factors of the traditional four factor test.").

¹⁴FEDERAL TRADE COMM'N, TO PROMOTE INNOVATION: THE PROPER BALANCE OF COMPETITION AND PATENT LAW AND POLICY, ch. 3, at 38-39 (Oct. 2003) ("2003 FTC IP Report"), available at <http://ftc.gov/os/2003/10/innovationrpt.pdf>.

¹⁵*eBay*, 547 U.S. at 396 (Kennedy, J. concurring).

¹⁶*Id.*

¹⁷MercExchange, LLC v. eBay, Inc., 500 F. Supp. 2d 556 (E.D. Va. 2007).

eBay decision in May 2006. Since that time, the district courts have decided numerous requests for permanent injunction and the Federal Circuit also has addressed the four factors several times in permanent injunction cases. Some trends have begun to emerge from this body of case law.

In the first year following the May 2006 decision, one article reported that district courts had granted permanent injunctions in 20 of 26 cases, or approximately 77% of the time.¹⁸ The article identified lack of competition between the patent holder and infringer as a significant indicator that a court would likely deny a motion for a permanent injunction in the remaining 23% of cases.¹⁹ A more recent survey of post-*eBay* cases examined 67 cases published in Lexis or available from Lexis' Courtlink function as of May 1, 2009.²⁰ The authors found that district courts had awarded permanent injunctions in 48 (or approximately 72%) of the cases.²¹

An article examining 27 cases decided in the year following *eBay* found that in the four cases involving non-practicing patentees, courts awarded no injunctions.²² This result led many to worry that patentees that did not practice their inventions would no longer be able to obtain permanent injunctions. Although non-practicing patentees have been less likely than practicing patentees to receive injunctions, the concern that injunctions are categorically unavailable is unwarranted. A longer term review of the post-*eBay* case law reveals that as of March 1, 2010, courts had heard thirteen requests for permanent injunctions where the opinion suggests that the patent owner is one of several types of non-practicing entities, including a university, research institute and independent inventor. Of those thirteen cases, district courts granted an injunction seven times.²³

¹⁸Robert A. Cote, *The State of Injunctions in a Post-eBay World*, Loyola IP Focus Series - Los Angeles, CA, at 4 (June 15, 2007), available at <http://www.lls.edu/ip/past-events/documents/Cote-Revised2.pdf>.

¹⁹*Id.* at 7-8.

²⁰Ernest Grumbles III et al., *The Three Year Anniversary of eBay v. MercExchange: A Statistical Analysis of Permanent Injunctions*, IP TODAY (Nov. 2009).

²¹*Id.*

²²Eric Keller, *Time Varying Compulsory License: Facilitating License Negotiation for Efficient Post-Verdict Patent Infringement*, 16 TEX. INTELL. PROP. L.J. 427, 434 (Spring 2008).

²³Broadcom Corp. v. Qualcomm, Inc., 543 F.3d 683 (Fed. Cir. 2008) (district court's injunction grant affirmed.); i4i Ltd. Partnership v. Microsoft Corp., 670 F. Supp. 2d 568 (E.D. Tex. 2009), *aff'd*, 598 F.3d 831 (Fed. Cir. 2010) (affirming the grant of an injunction while modifying its effective date), *cert. granted*, 79 U.S.L.W. 3326 (U.S. Nov. 29, 2010) (No. 10-29); Creative Internet Advertising Corp. v. Yahoo! Inc., No. 6:07cv354, 2009 WL 4730622 (E.D. Tex. Dec. 9, 2009) (injunction denied); Kowalski v. Mommy Gina Tuna Resources, Nos. 05-00679, 05-00787, 06-00182, 2009 WL 856006 (D. Haw. March 30, 2009) (injunction granted), *clarified by*, 2009 WL 1360695 (D. Haw. May 7, 2009); Joyal Products, Inc. v. Johnson Electric North America, Inc., No. 04-5172, 2009 WL 512156 (D. N.J. Feb. 27, 2009) (injunction granted), *aff'd per curiam*, 335 Fed. Appx. 48 (Fed. Cir. 2009); Hynix Semiconductor,

To gain a better understanding of how different fact patterns influence district courts' decisions to grant or deny an injunction following the Supreme Court's 2006 decision in *eBay v. MercExchange*,²⁴ panelist Steve Malin conducted a survey of post-eBay cases decided through December 31, 2008. He presented the results at the FTC hearing on the Evolving IP Marketplace on February 12, 2009.²⁵

To generate the results presented at the FTC hearing, Mr. Mallin updated a survey he had originally produced for a subcommittee of the American Intellectual Property Law Association (AIPLA).²⁶ The survey presented at the FTC hearing included 49 cases decided between May 15, 2006 and December 31, 2008. The sample did not include all post-*eBay* permanent injunction cases decided during the time frame, however. If an opinion did not offer sufficient information to determine the factors the courts used in deciding whether to grant an injunction, or if an opinion focused on technical procedural issues, it was removed from the sample.²⁷

The survey result statistics were generated by evaluating whether courts used any of 28 pre-identified factors in determining whether to grant a permanent injunction (see the blank survey sheet below). At least two attorneys reviewed each opinion and determined whether it discussed any of these factors. The statistics measure the courts' assessment of the factors, and

Inc. v. Rambus Inc., 609 F. Supp. 2d 951 (N.D. Cal. 2009) (injunction denied); Telcordia Tech., Inc. v. Cisco Systems, Inc., 592 F. Supp. 2d 727, (D. Del. 2009) (injunction denied), *aff'd in part and vacated in part*, 612 F.3d 1365 (Fed. Cir. 2010); Voda v. Cordis Corp., No. CIV-03-1512, 2006 WL 2570614 (W.D. Okla. Sept. 5, 2006), *aff'd*, 536 F.3d 1311 (Fed. Cir. 2008) (injunction denied); Emory Univ. v. Nova Biogenics, Inc., No. 1:06-CV-0141, 2008 WL 2945476 (N.D. Ga. July 25, 2008) (injunction granted); Commonwealth Scientific and Indus. Research Org. v. Buffalo Tech., Inc. ("CSIRO"), 492 F. Supp. 2d 600, 601 (E.D. Tex. 2007) (injunction granted); Johns Hopkins Univ. v. Datascope Corp., 513 F. Supp. 2d 578 (D. Md. 2007) (injunction granted), *rev'd on other grounds and remanded*, 543 F.3d 1342 (Fed. Cir. 2008); z4 Technologies, Inc. v. Microsoft Corp., 434 F. Supp. 2d 437, (E.D. Tex. 2006) (injunction denied); Paice, LLC v. Toyota Motor Corp., No. 2:04-CV-211, 2006 WL 2385139 (E.D. Tex. Aug. 16, 2006) (injunction denied), *aff'd in part, vacated in part and remanded*, 504 F.3d 1293 (Fed. Cir. 2007), *on remand*, 2009 U.S. Dist. Lexis 32723 (E.D. Tex. April 17, 2009). See Sections III.A.2 and III.A.3 for discussion of cases.

²⁴547 U.S. 388 (2006).

²⁵Steve Malin & Ari Rafilson, *Empirical Analysis of Permanent Injunctions Following eBay*, presented at FTC Hearing: The Evolving IP Marketplace (Feb. 12, 2009), available at <http://www.ftc.gov/bc/workshops/ipmarketplace/fcb11/docs/smalin.pdf>.

²⁶Malin et al., *Injunctive Relief After eBay v. MercExchange*, available at http://www.foley.com/files/tbl_s31Publications/FileUpload137/4541/InjunctiveReliefAfterBay.pdf.

²⁷Malin at 9-10 (2/12/09).

thus the opinion must have discussed the factor to receive a yes or a no check mark.²⁸ If the reviewing attorneys disagreed, they conferred and reached an agreement on the how the court had reached its injunction decision.

The factors fall into three subcategories: (1) those related to the patentee's business; (2) those related to the defendant's business; and (3) those that related to the public interest. These categories were also designed to track the four factors. Those concepts that relate to the patentee's business also track the factors courts have used to evaluate the irreparable harm and inadequate damages prong of the *eBay* test and track plaintiff's arguments.²⁹ The concepts that relate to the defendant's business track factors that courts have used to evaluate the balance of the hardship prong.³⁰ The concepts that related to the public interest should track considerations of the effect of an injunction on third parties and the public in general. Results are reported in the table below and in Chapter 8 of this report. A blank survey checklist identifying all of the factors used by the attorneys reviewing the cases is included at the end of this appendix.

²⁸If the court did not discuss the factor, the reviewing attorney would have check N/A. Attorneys did not rely on information known to them outside of the opinion. For instance, one of the factors measured by the survey was whether the patentee practiced the patent. If a case involved a consumer good that an attorney knew the patentee produced, but the court did not indicate that the patentee practiced the patent, that survey sheet for the case would not state that whether the patentee practiced the patent but have the N/A box checked for that factor.

²⁹Malin at 7-8 (2/12/09).

³⁰*Id.* at 7-8.

Potentially Relevant Fact Pattern	Number of Cases (of 49) that Cited the Fact	Grant Rate when YES	Grant Rate when NO
<u>Patentee Facts</u>			
Practicing Patentee	43	83%	43%
Patentee and Defendant Compete	42	87%	25%
Lost Sales to Defendant	36	88%	25%
Harm to Patentee's Reputation	24	95%	0%
Patentee Licensed Others	21	63%	80%
<u>Defendant Facts</u>			
Willfulness	25	75%	40%
Impact on Defendant's Business	24	79%	70%
Harm to Defendant's Customers	19	50%	100%
Minor Impact of Defendant's Sales	17	80%	100%
Voluntary Offer to Avoid Future Infringement	15	80%	40%
Compliance with the Injunction is Easy	13	92%	0%
<u>Public Interest</u>			
Health Concern	15	50%	91%

III. Analysis of the Four Factors in Post-*eBay* Decisions

As more court decisions address the availability of injunctions post-*eBay*, several themes and approaches for analyzing the four equitable factors have appeared. In many cases, courts have focused the bulk of their discussions on the irreparable harm and inadequate damages factors. In these cases, the analysis of the balance of hardships emphasized the irreparable harm to the patentee. In many of these instances, courts declined to consider harm to the defendant, relying on Federal Circuit precedent that a defendant who builds a business around an infringing product cannot be heard to complain.³¹ Where courts have considered harm to the infringer, they often look to the size of the infringing company, whether the injunction will affect a large portion of its total sales, or whether the injunction will have other devastating effects. In evaluating the public interest prong, courts will recite the public's interest in a patent system that furthers innovation.³² In cases where courts have engaged in additional analysis of the public interest, they mainly have focused on traditional health and safety concerns. However, a few courts have considered the effects on third party customers.

A. Irreparable Harm/Inadequate Money Damages

The first two of the four equitable factors recited in *eBay*, irreparable harm to the patentee caused by infringement and the inadequacy of money damages to remedy that harm, are closely linked and courts sometimes analyze them together. They reason that "irreparable harm" is that which "cannot be adequately atoned for in money."³³ One scholar also considers the irreparable injury factor equivalent to the no adequate legal remedy factor.³⁴ The inquiry has often focused

³¹ *Windsurfing*, 782 F.2d at 1003 ("One who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business so elected.").

³² *Telequip Corp. v. The Change Exchange*, No. 5:01-CV-1748, 2006 WL 2385425, at *2 (N.D.N.Y. Aug. 15, 2006) (holding that absent available injunctions, the right to exclude would have only a fraction of the value it was intended and would not be an incentive for scientific research); *Zen Design Group, Ltd. v. Clint*, No. 08-cv-14309, 2009 WL 4050247 (E.D. Mich. Nov. 23, 2009) (holding that without a permanent injunction a patent's actual value would be reduced to a fraction of its intended value).

³³ *Wald v. Mudhopper Oilfield Services, Inc.* No. CIV-04-1693, 2006 WL 2128851 (W.D. Okla. July 27, 2006) (stating that irreparable harm often occurs when an injury cannot be adequately atoned for in money); *Paice*, 2006 WL 2385139, at *5 ("Irreparable harm lies only where injury cannot be undone by monetary damages."); *Sprigman* at 28 (2/12/09) (stating that inadequacy of money damages is the mirror image of the irreparable harm factor and courts have treated them as one inquiry).

³⁴ DOUGLAS LAYCOCK, THE DEATH OF THE IRREPARABLE INJURY RULE, 8-9 (1991). Professor Laycock argues that the "irreparable injury rule has two formulations." One is "[e]quity will act only to prevent irreparable injury" and the other is "equity will act if there is no adequate legal remedy." According to Professor Laycock, "[t]he two formulations are equivalent; what makes an injury irreparable is that no

on whether the parties competed and the harm that the patentee would suffer as a result of that competition, although courts have also found irreparable harm absent such competition. A lesser but still significant area of inquiry has been the relationship of the patented invention to the infringing product, and whether the invention was a small component that did not drive sales of the product.

1. Cases in Which the Patentee and Defendant Competed

Many district courts have placed the burden of proving irreparable harm on the patentee.³⁵ When patentees and infringers compete in a goods market, district courts have typically granted permanent injunctions.³⁶ However, some courts have declined to find this factor sufficiently satisfied to warrant an injunction based solely on general assertions of competition.³⁷ They require clear evidence such as lost market share, lost customers and price erosion.³⁸ The loss of

other remedy can repair it.” He adds, “I believe that no significant distinction can be drawn between irreparable injury and adequate remedy formulations” and he uses the two interchangeably throughout his book.

³⁵See, e.g., *z4*, 434 F. Supp. 2d at 440 (E.D. Tex. 2006) (holding that eBay eliminated irreparable harm presumption in permanent injunction context). In a non-precedential preliminary injunction case, the Federal Circuit also stated that *eBay* removed the presumption of irreparable harm and “[t]he burden is now on the patentee to demonstrate that its potential losses cannot be compensated by monetary damages.” *Automated Merchandising Sys. v. Crane Co.*, Nos. 2009-1158, 2009-1164, 2009 WL 4878643, at *3 (Fed. Cir. Dec. 16, 2009). *But see Broadcom*, 543 F.3d at 702 (“[i]t remains an open question whether there remains a rebuttable presumption of irreparable harm following *eBay*.” (citations omitted)).

³⁶Springman at 35 (2/12/09); Malin at 12-13 (2/12/09); Bernard H. Chao, *After eBay Inc. v. MercExchange: The Changing Landscape for Patent Remedies*, 9 MINN. J.L. SCI. & TECH. 543, 549 (2008).

³⁷See, e.g., *Praxair Inc. v. ATMI, Inc.*, 479 F. Supp. 2d 440, 444 (D. Del. 2007) (denying injunction because patentee put forth general arguments about lost market share, profits, and goodwill, but did not identify specific losses or offer supporting data); *IMX, Inc. v. Lendingtree, LLC*, 469 F. Supp. 2d 203, 225 (D. Del. 2007) (denying injunction because plaintiff did not proffer evidence such as market or financial data to support otherwise sweeping statements); *Advanced Cardiovascular Sys., Inc. v. Medtronic Vascular, Inc.*, 579 F. Supp. 2d 554, 560-61 (D. Del. 2008) (finding no irreparable harm despite competition between parties because patentee failed to identify any specific lost customers).

³⁸See, e.g., *Verizon Services Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295 (Fed. Cir. 2007) (finding that lost customers and price erosion provide evidence of irreparable harm); *Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc.*, No. 04-1371, 2008 WL 5210843 (D. Del. Dec. 12, 2008) (lost market share, harm to plaintiff's reputation and goodwill); *Sensormatic Electronics Corp. v. Tag Co. U.S.*, 632 F. Supp. 2d 1147 (S.D. Fla. 2008) (future loss of market share and price erosion), *aff'd in part*, 367 Fed. Appx. 143 (Fed. Cir. 2010) (non-precedential opinion); *Becton Dickinson & Co. v. Tyco Healthcare Group, LP*, No. 02-1694, 2008 WL 4745882 (D. Del. Oct. 29, 2008) (lost market share and customers);

“sticky” customers has been one way to establish irreparable harm. In finding irreparable harm based on Echostar’s infringement of TiVo’s digital video recorder (DVR) technology patents, the court emphasized that competition in the nascent DVR market would cause TiVo to lose “sticky customers,” those who are loyal or “locked-in” due to a hardware purchase, at a critical time.³⁹ In *Transamerica*, the court also found irreparable harm based on the loss of “sticky customers” who purchased long-term infringing retirement annuities.⁴⁰

A few courts have recognized that a determination of whether the infringement caused the patentee to lose customers will depend, in part, on the definition of the market in which the patentee and infringer compete. In the *Martek* case, for example, the court relied upon a narrow market definition to determine that the infringer was the patentee’s sole competitor, and therefore necessarily targeted the patentee’s customers, causing irreparable harm through lost market share.⁴¹ A broader market definition that included alternatives to the patented invention might have supported a conclusion that the infringer’s customers would have chosen a non-infringing product and so the infringement did not cause the patentee’s lost market share.⁴² For instance, when finding no irreparable harm in *Advanced Cardiovascular Systems*, the court pointed to market data establishing the presence of non-infringing competitors. The court also noted the patentee’s admission that it had recaptured almost all market share lost due to infringement.⁴³

Brooktrout, Inc. v. Eicon Networks Corp., No. 2:03-CV-59, 2007 WL 1730112 (E.D. Tex. June 14, 2007) (lost market share); MPT, Inc. v. Marathon Labels, Inc., 505 F. Supp. 2d 401 (N.D. Ohio 2007) (lost market share and customer goodwill), *aff’d in part, rev’d in part*, 258 Fed. Appx. 318 (Fed. Cir. 2007); Transocean Offshore Deepwater Drilling, Inc. v. GlobalSanteFe Corp., No. H-03-2910, 2006 WL 3813778 (S.D. Tex. Dec. 27, 2006) (citing evidence from the trial record that the parties had customers in common and the defendant used its infringing products to win bids from the patent holder).

³⁹TiVo v. Echostar Commc’ns Corp., 446 F. Supp. 2d 664, 667 (E.D. Tex. 2006), *aff’d in part, rev’d in part*, 516 F.3d 1290 (Fed. Cir. 2008).

⁴⁰Transamerica Life Insurance Co. v. Lincoln Nat’l Life Ins. Co., 625 F. Supp. 2d 702 (N.D. Iowa 2009), *rev’d on other grounds sub nom.*, Lincoln Nat. Life Ins. Co. v. Transamerica Life Ins. Co., 609 F.3d 1364 (Fed. Cir. 2010).

⁴¹Martek Biosciences Corp. v. Nutrinova Inc., 520 F. Supp. 2d 537 (D. Del. 2007) (defining the market as vegetarian DHA for adult foods and beverages), *aff’d in part and rev’d in part*, 579 F.3d 1363 (Fed. Cir. 2009); *see also* Arlington Indus., Inc. v. Bridgeport Fittings, Inc., No. 3:01-CV-0485, 2010 WL 817519, at *3-4 (M.D. Pa. March 9, 2010) (the district court defined the market as the narrow subset of electrical conduit fittings, essentially defined by the patents at issue).

⁴²Chapter 7, Section III.

⁴³*Advanced Cardiovascular Systems*, 579 F. Supp. 2d at 560-61 (D. Del. 2008). The court also noted the patentee’s willingness to license other competitors in finding that money damages were adequate compensation.

One case has recognized that the relevant market may extend beyond products that incorporate the patented technology. The Federal Circuit affirmed the grant of a permanent injunction after Qualcomm was found to infringe two Broadcom patents related to CDMA cell phone technology.⁴⁴ Qualcomm argued that Broadcom, which makes only WCDMA chips not using the patented technology, suffered no irreparable harm because it did not compete with Qualcomm's infringing CDMA chips. But the district court rejected this argument on the basis that the two firms competed for "design wins for the development and production of cell phones" rather than for "each consumer sale."⁴⁵

In identifying irreparable harm caused by competition between a patentee and infringer, courts have also looked beyond lost customers and price erosion to the more qualitative concern of damage to a patentee's reputation.⁴⁶ As one court explained, competition from an infringing product can damage the patentee's good will or brand name recognition. Because that damage is "impossible" to quantify, it cannot be adequately compensated by money damages, and so supports the grant of an injunction.⁴⁷ Similarly, in a case involving a product for treating oil wells, the court cited harm to the patentee's reputation as an innovator and its ability to maintain its product as the "industry standard," in addition to lost market share, to support its finding of irreparable harm.⁴⁸ Another district court cited evidence that the defendant's infringement not only harmed a medical device manufacturer plaintiff's market share and profits, but also interfered with the patentee's ability to form relationships with surgeons, and as a result damaged its reputation and ability to innovate.⁴⁹

2. Cases In Which Courts Granted Injunctions to Patentees that Did Not Practice the Patent

Although courts typically find irreparable harm when a patentee and infringer compete in a goods market, the converse – that they find a lack of irreparable harm absent competition – should not be assumed. Courts have found irreparable harm that could not be adequately

⁴⁴ *Broadcom*, 543 F.3d at 683.

⁴⁵ *Id.* at 702.

⁴⁶ See, e.g., *Emory*, 2008 WL 2945476, at *4.

⁴⁷ *z4*, 513 F. Supp. 2d at 442; *Callaway Golf Co. v. Acushnet Co.*, 585 F. Supp. 2d 600, 621 (D. Del. 2008) (holding that reputational harm supported injunction even though the patentee no longer marketed patented golf balls), *aff'd in part, vacated in part*, 576 F.3d 1331 (Fed. Cir. 2009); *see also* *Sprigman* at 41-42 (2/12/09).

⁴⁸ *Wald*, 2006 WL 2128851, at *5.

⁴⁹ *Smith & Nephew, Inc. v. Synthes*, 466 F. Supp. 2d 978, 983 (W.D. Tenn. 2006).

compensated by money damages where the patentee did not practice the patent.⁵⁰ Their reasoning varies, depending on the nature of the patentee. In two cases involving non-practicing patentees, the court relied only on harm to the patentee's right to exclude and the economic value of a patent as supporting an injunction.⁵¹ Other cases rely on additional evidence, however.

In two cases in which the patentees were universities, their exclusive licensees marketed products in competition with the infringing products. In both cases, the university and its licensee joined suit and the court granted an injunction.⁵² In *Johns Hopkins*, the court determined that the exclusive licensee and the defendant were the only two competitors in the market and any sales by the defendant would result in lost sales to the licensee.⁵³ Additionally, the court noted harm to the plaintiffs' reputations and injury to the patentee's right to exclude.⁵⁴ In *Emory*, the court found irreparable harm based on harm to the university's reputation. The court explained, "when an infringing company is not actively selling the offending product, the harm to a patent-holder may seem esoteric. But the negative effects of the Plaintiffs' potential loss in goodwill, market share, and prestige are real, and would be difficult to quantify solely through monetary damages."⁵⁵

District courts have also granted injunctions to organizations that often seek to license their patents non-exclusively. The Commonwealth Scientific and Industrial Research Organisation ("CSIRO"), a scientific research organization established by the Australian government, conducts scientific research in many technological areas and licenses its patented technology. The court found that infringement of CSIRO's patent on a wireless local area network had caused irreparable harm by depriving CSIRO of licensing revenues that would have

⁵⁰See *supra* note 23.

⁵¹In *Joyal*, the district court granted an injunction to a patent holder that had ceased manufacturing operations and no longer practiced its patents based on argument that continuing infringement would devalue the patent and undermine the patentee's ability to sell it at a desirable price. *Joyal*, 2009 WL 512156, at *11; See also *Kowalski*, 2009 WL 856006, at *1 (injunction granted to independent inventor based on right to exclude).

⁵²*Emory*, 2008 WL 2945476; *Johns Hopkins*, 513 F. Supp. 2d at 578. But see *Voda*, 2006 WL 2570614, in which the court rejected the licensor patentee's argument that it could demonstrate irreparable harm to itself based on harm to its exclusive licensee. The exclusive licensee was not joined in the suit, and it appears that the patentee did not provide evidence of how harm to the licensee would directly harm it.

⁵³*Johns Hopkins*, 513 F. Supp. 2d at 586 ("In fact, it is the only competition and thus, its sale reduces the Plaintiffs' market share.").

⁵⁴*Id.* ("As the principal value of a patent is its statutory right to exclude, the nature of the patent grant weighs against holding that monetary damages will always suffice to make the patentee whole." (citations omitted)).

⁵⁵*Emory*, 2008 WL 2945476, at *5.

funded additional projects and diverting funds from its research function to patent litigation.⁵⁶ The court also noted harm to CSIRO's reputation as a research institution and its ability to recruit top scientists.⁵⁷

In *Broadcom v. Qualcomm*, the district court and Federal Circuit recognized that a patentee may not practice its asserted patents, yet still compete with an infringer and suffer irreparable harm stemming from that competition. Broadcom held patents covering aspects of Qualcomm's CDMA cell phone technology, but it did not practice that technology in its WCDMA chips. The court found that the infringement might harm Broadcom's ability to compete with CDMA chips in a market for "design wins." The court explained the irreparable harm caused by the infringement: "In this kind of a market, the exclusion has a competitive effect on a firm even if it does not have an immediately available product."⁵⁸

In one case, the Federal Circuit and district court have based a finding of irreparable harm in part on the past harm infringement imposed on the patentee. In *i4i*,⁵⁹ the Federal Circuit stated that it was proper for the district court to consider "strong circumstantial evidence that Microsoft's infringement rendered i4i's product obsolete. . .causing i4i to. . .change its business strategy to survive."⁶⁰ The court cited past infringement as causing 80% loss of market share,⁶¹ loss of revenue, and harm to brand name recognition and customer goodwill.⁶¹

3. Cases In Which Courts Denied Injunctions to Patentees that Did Not Practice the Patent

District courts have denied injunctions to patent holders who did not practice the patented invention in six identified cases.⁶² None of these decisions depend categorically on the fact that the patentee did not manufacture a product to support denial of the injunction. In two cases,

⁵⁶ *CSIRO*, 492 F. Supp. 2d at 603-08. The district court in *Hynix v. Rambus* criticized this rationale, explaining that the court's examination of irreparable harm was inappropriately retrospective and did not examine the harm that *CSIRO* would prospectively incur upon denial of an injunction. The *Hynix* court also criticized the *CSIRO* court's reliance on harm caused by infringers other than the defendant. *Hynix*, 609 F. Supp. 2d at 983. Interestingly, the *CSIRO* court also failed to discuss the import of *CSIRO*'s earlier RAND commitment to a standard setting organization.

⁵⁷ *CSIRO*, 492 F. Supp. 2d at 604.

⁵⁸ *Broadcom*, 543 F.3d at 702 (Fed. Cir. 2008).

⁵⁹ *i4i*, 598 F.3d at 831.

⁶⁰ *Id.* at 862.

⁶¹ *Id.*

⁶² See *supra* n.23.

*Voda*⁶³ and *Telcordia*⁶⁴, the patentee provided very little evidence that might have sufficed to carry its burden of proving irreparable harm. In *z4*⁶⁵ and *Paice*⁶⁶, the court considered a wide range of facts in finding no irreparable harm. The *Hynix*⁶⁷ case is the first to emphasize that equitable injunctions are forward, not backward looking, although the recent Federal Circuit decision in *i4i*⁶⁸ focuses attention on permitting an analysis of past harm to evaluate the injunction decision.

In *Telcordia v. Cisco Systems*, the district court rejected licensing company Telcordia's argument that it would suffer irreparable harm absent an injunction because "its lifeblood was its ability to enforce its patents and continue to generate innovative solutions. . . ."⁶⁹ The court found this argument lacking primarily because it consisted of merely attorney argument, with no supporting evidence of harm, such as lost sales, licensing or R&D opportunities. Telcordia was able to obtain licenses from other companies, suggesting that its licensing program was not harmed.⁷⁰ In *Voda*, the Federal Circuit affirmed the denial of an injunction when the district court rejected the licensor patentee's argument that it could demonstrate irreparable harm to itself based on harm to its exclusive licensee.⁷¹ The exclusive licensee was not joined in the suit, and it appears that the patentee did not provide evidence of how harm to the licensee would directly harm it.⁷² The Federal Circuit also rejected Voda's argument that in denying the injunction, the district court was adopting a categorical rule that denied injunctions to non-practicing patentees,

⁶³ *Voda*, 2006 WL 2570614, at *5.

⁶⁴ *Telcordia*, 592 F. Supp. 2d at 747, *aff'd in part, vacated in part*, 612 F.3d 1365 (Fed. Cir. 2010).

⁶⁵ *z4*, 434 F. Supp. 2d at 437.

⁶⁶ *Paice*, 2006 WL 2385139, *aff'd in part, vacated in part, and remanded*, 504 F.3d 1293 (Fed. Cir. 2007).

⁶⁷ *Hynix*, 609 F. Supp. 2d at 951.

⁶⁸ *i4i*, 598 F.3d at 861-62.

⁶⁹ *Telcordia*, 592 F. Supp. 2d at 747, *aff'd in part, vacated in part*, 612 F.3d 1365 (Fed. Cir. 2010).

⁷⁰ *Id.* at 747-48.

⁷¹ *Voda*, 536 F.3d at 1329.

⁷² *Id.* Similarly, in a case involving practicing patent holders, the district court denied the injunction because there was no nexus between the harm and party. In this case, the only party the court determined had standing in an infringement case failed to proffer evidence of direct harm to itself and instead relied on harm to a co-plaintiff. *Medtronic Sofamor Danek USA, Inc. v. Globus Medical, Inc.*, 637 F. Supp. 2d 290 (E.D. Pa. 2009), *aff'd*, No. 2009-1525, 2011 WL 229563 (Fed. Cir. Jan. 26, 2011).

stating that non-practicing patent holders may be able to obtain injunctions provided they can prove irreparable injury to themselves and satisfy the four factor test.⁷³

In *z4 v. Microsoft*, one of the first cases following the Supreme Court's *eBay* decision, a district court denied patent licensing company, *z4*, an injunction after a jury found that Microsoft's Windows XP and Office products willfully infringed *z4*'s patent on product activation software.⁷⁴ The court rejected *z4*'s argument that its licensing program would be irreparably harmed by ongoing infringement for several reasons. Because Microsoft did not offer product activation software separate from its own products, customers would not be dissuaded from licensing *z4* technology by Microsoft's infringement. *z4* would suffer no lost market share or name recognition. The court also relied on the fact that the infringing feature was a small component of Microsoft's products and that the component did not relate to their core functionality.⁷⁵ Finally, the court determined that Microsoft's plans to phase out this software would make the damages from any future infringement easy to calculate.⁷⁶

Similarly in *Paice v. Toyota*, the district court considered many facts in finding a lack of irreparable harm and denying the request for an injunction by a patent licensing company. Toyota was found to infringe *Paice*'s patent on drive train technology for hybrid electric vehicles. In evaluating irreparable harm, the court noted "that because Plaintiff does not compete for market share with the accused vehicles, concerns regarding loss of brand name recognition are market share. . .are not implicated."⁷⁷ The court found that *Paice*'s problems licensing its technology were due to its business practices, not Toyota's infringement. It also relied on the fact that the patented invention was a small component of the accused device.⁷⁸

In *Hynix v. Rambus*, the district court found that the patentee Rambus, a semiconductor design firm that licenses its technology, did not prove irreparable harm and entitlement to an injunction. The court's analysis recognized that the purpose of equitable injunctions is to relieve future harm and not to punish past conduct.⁷⁹ For that reason, the court considered only the harm

⁷³ *Voda*, 536 F.3d at 1329.

⁷⁴ *z4*, 513 F. Supp. 2d at 439-42.

⁷⁵ *Id.* at 441 (discussing Justice Kennedy's concurrence in *eBay* to support conclusion that monetary damages would be sufficient to compensate *z4* for any future infringement).

⁷⁶ *Id.* at 442.

⁷⁷ *Paice*, 2006 WL 2385139, at *5.

⁷⁸ *Id.* at *4-5.

⁷⁹ *Hynix*, 609 F. Supp. 2d at 968-69. *See also* *Nichia Corp. v. Seoul Semiconductor, Ltd.*, No. 06-0162, 2008 WL 346416, at *1 (N.D. Cal. Feb. 7, 2008) (holding that the purpose of an injunction is to prevent

that the patentee would suffer in the future due to on-going infringement, and not the harm that it suffered in the past. An injunction, by its nature, could not compensate the patentee for past infringement harm, the court explained. Ultimately, the court found that since the patents in suit would expire in a year, and Rambus was willing to license, any harm to the patentee from denial of the injunction would be slight.⁸⁰ This contrasts with the Federal Circuit's statement that, even though injunctions are tools for correcting future harm, it is proper for the district court to consider past harm in determining whether to grant an injunction.⁸¹

B. Balance of the Hardships Between the Parties

eBay's third equitable factor requires patentees to show that "considering the balance of hardships between the plaintiff and defendant, [an injunction] is warranted."⁸² The irreparable harm analysis, to the extent it considers harm to the patentee from on-going infringement, will define the hardship faced by the patentee. Some courts have also identified trespass of the patentee's "right to exclude" as a hardship to be considered.⁸³

The third factor also requires courts to consider the hardship an injunction would impose on the infringer. When courts have granted an injunction, some commentators have noted that most of the analysis occurs during the irreparable harm factor.⁸⁴ Courts frequently dismiss the infringer's complaints of hardship by explaining that "[o]ne who elects to build a business on a product found to infringe cannot be heard to complain if an injunction against continuing infringement destroys the business."⁸⁵ In other cases, courts have more carefully considered the

future harm).

⁸⁰ *Hynix*, 609 F. Supp. 2d at 983-85. The court also denied the injunction because in weighing the hardships on the parties, it found that an injunction would "decimate" the infringer's business. *Id.* at 985.

⁸¹ *i4i*, 598 F.3d at 861-62. ("Although injunctions are tools for prospective relief designed to alleviate future harm, by its terms the first *eBay* factor looks, in part, at what has already occurred.").

⁸² *eBay*, 547 U.S. at 391.

⁸³ See e.g., *Brooktrout*, 2007 WL 1730112, at *2 (holding that absent an injunction, Brooktrout would lose goodwill, potential revenue, and the right to exclude); *Visto Corp. v. Seven Networks, Inc.*, No. 2:03-CV-333, 2006 WL 3741891, at * 4 (E.D. Tex. Dec. 19, 2006) (holding that if no permanent injunction were entered, Visto would lose goodwill, potential revenue, and the right to exclude); *3M Innovative Properties Co. v. Avery Dennison Corp.*, No. 01-1781, 2006 WL 2735499, at *2 (D. Minn. Sept. 25, 2006) (finding that patentee had been barred from exercising its right to exclude).

⁸⁴ *Malin* at 98-99 (2/12/09); *Badenoch* at 111-12 (2/12/09).

⁸⁵ *3M Innovative Properties*, 2006 WL 2735499, at *2 (citing *Windsurfing*, 782 F.2d at 1003); see also *Johns Hopkins*, 513 F. Supp. 2d at 586 (holding that hardship for loss of sales and for ceasing operations not sufficient because they were direct consequences of the illegal patent infringement), *rev'd and*

effect of an injunction on the infringer, but found insufficient hardship to tip the balance towards denying the injunction.⁸⁶ Several reasons have been given, including: the defendant's size, especially compared to the patentee;⁸⁷ the defendant's minimal investment developing the infringing product;⁸⁸ and the percentage of the defendant's business comprised of infringing products.⁸⁹

The cases in which courts have found that the balance of hardships tipped toward the infringer and supported denial of an injunction are typically those in which the patentee failed to prove irreparable harm and the consequences of an injunction for the infringer would have been severe. In the *z4* case, for instance, the court concluded that "turning off" activation software in Microsoft products would flood the market with pirated software and lead to incalculable losses for the defendant.⁹⁰ In *Paice*, the court concluded that enjoining defendant Toyota's car sales would not only affect the defendant, but also its dealers and suppliers.⁹¹ The *Hynix* court worried that prohibiting use of patented technology that had been incorporated into an industry standard would "decimate" the infringer's business in a situation where Rambus had not disclosed its patent rights during the standard setting process.⁹²

remanded, 543 F.3d 1342 (Fed. Cir. 2008); *Smith & Nephew*, 466 F. Supp. 2d at 984-85 ("Although Synthes' effort, time, and expense in redesigning [the infringing product] might be significant, that is the consequence of patent infringement.").

⁸⁶ *Callaway Golf*, 585 F. Supp. 2d at 622; *TiVo*, 446 F. Supp. 2d at 670; *Power-One, Inc. v. Artesyn Technologies, Inc.*, No. 2:05-CV-463, 2008 WL 1746636 (E.D. Tex. April 11, 2008), *aff'd*, 599 F.3d 1343 (Fed. Cir. 2010); *Martek Biosciences Corp. v. Nutrinova Inc.*, 520 F. Supp. 2d 537, 559 (D. Del. 2007), *aff'd in part, rev'd in part*, 579 F.3d 1363 (Fed. Cir. 2009); *MPT*, 505 F. Supp. 2d at 420; *800 Adept, Inc. v. Murex Securities, Ltd.*, 505 F. Supp. 2d 1327 (M.D. Fla. 2007), *aff'd in part, vacated in part, and rev'd in part*, 539 F.3d 1354 (Fed. Cir. 2008), *rehearing and rehearing en banc denied*, (2008).

⁸⁷ *Callaway Golf*, 585 F. Supp. 2d at 622 (finding that defendant made several non-infringing products and was owned by a multi-billion dollar conglomerate); *TiVo*, 446 F. Supp. 2d at 670 (finding that patentee was a new and small company).

⁸⁸ *Power-One*, 2008 WL 1746636, at *1 n.1 (finding that infringer spent only \$20,000 developing infringing product compared to patentee's \$20 million).

⁸⁹ *Martek*, 520 F. Supp. 2d at 559 (finding that infringing product represented only a small percentage of infringer's total business); *MPT*, 505 F. Supp. 2d at 420 (finding that only 10-15% of the defendants sales were for the infringing product); *800 Adept*, 505 F. Supp. 2d at 1338 (finding that provision of infringing services was a small part of infringer's business, but the primary activity of patentee).

⁹⁰ *z4*, 513 F. Supp. 2d at 443.

⁹¹ However, the Federal Circuit has held that the effect on third parties is irrelevant under the third prong of the injunction test. *Acumed, LLC v. Stryker Corp.*, 551 F.3d 1323, 1330 (Fed. Cir. 2008).

⁹² *Hynix*, 609 F. Supp. 2d at 984-85.

In some cases, courts have found that the hardship to the infringer can be ameliorated by delaying the start of the injunction in order to give the infringer time to design around the patent. For instance in *Broadcom*, the district court permitted a twenty month delay to the start of the injunction to reduce the effects of the injunction on infringer Qualcomm.⁹³ Similarly, the district court in *i4i* permitted a sixty day delay to abrogate the difficulties Microsoft would face in redesigning its software to comply with the injunction.⁹⁴ However, in *TiVo*, the court declined to delay the start of an injunction, stating that the harm to the defendant's business was insufficient to warrant the delay and would further harm TiVo.⁹⁵ Other courts have suggested that narrowly tailoring the injunction will mitigate harm to the defendant.⁹⁶

C. Public Interest Prong

The fourth factor of the equitable injunction analysis examines whether the public interest would be disserved by a permanent injunction. Only a small number of post-*eBay* cases have provided an extended discussion of this factor in deciding whether to grant an injunction. In the majority of cases, courts simply recognize that the "public has an interest in maintaining a strong patent system. This interest is served by enforcing an adequate remedy for patent infringement."⁹⁷ Presumably, this common statement refers to the patent system's role in

⁹³ *Broadcom*, 543 F.3d at 704 (holding that a sunset provision would ameliorate the negative effects from an injunction).

⁹⁴ *i4i*, 670 F. Supp. 2d at 603. On appeal, the Federal Circuit increased the sunset provision to five months, finding the district court erred in not citing evidence to support its 60 day sunset provision when Microsoft witnesses had declared the redesign would take at least five months. *i4i*, 598 F.3d at 861 (Fed. Cir. 2010), *cert. granted*, 79 U.S.L.W. 3326 (U.S. Nov. 29, 2010) (No. 10-290).

⁹⁵ *TiVo*, 446 F. Supp. 2d at 671 (finding that an injunction would have a severe financial impact on defendant's core business).

⁹⁶ *Power-One*, 2008 WL 1746636, at *1 n.1 (*citing Brooktrout*, 2007 WL 1730112, at *2).

⁹⁷ *TiVo*, 446 F. Supp. 2d at 670. *See also* *Funai Electronics Co., Ltd. v. Daewoo Elec. Corp.*, 593 F. Supp. 2d 1088, 1111 (N.D. Cal. 2009); *Kowalski*, 2009 WL 856006, at *2; *Mass Engineered Design, Inc. v. Ergotron, Inc.*, 633 F. Supp. 2d 361, 394 (E.D. Tex 2009); *Becton Dickinson*, 2008 WL 4745882, at *4 (noting that plaintiff offered no evidence of harm to public health or safety from the injunction); *Emory*, 2008 WL 2945476, at *5 (noting the public would not lose a major supplier of antimicrobial products); *Power Integrations*, 2008 WL 5210843, at *1; *Power-One*, 2008 WL 1746636, at *1 n.1; *Sensormatic*, 632 F. Supp. 2d at 1182; *TruePosition, Inc. v. Andrew Corp.*, 568 F. Supp. 2d 500, 533 (D. Del. 2008), *amended in part*, 2009 WL 192470 (D. Del. Jan. 27, 2009), *aff'd*, 389 Fed. Appx. 1000 (Fed. Cir. 2010); *Trading Technologies Int'l, Inc. v. eSpeed, Inc.*, No. 04-C-5312, 2008 WL 4531371, at *5 (N.D. Ill. May 22, 2008), *aff'd*, 595 F.3d 1340 (Fed. Cir. 2010); *Atlanta Attachment Co. v. Leggett & Platt, Inc.*, No. 1:05-CV-1071, 2007 WL 5011980, at *8 (N.D. Ga. Feb. 23, 2007); *Baden Sports, Inc. v. Kabushiki Kaisha Molten*, No. C06-210, 2007 WL 2790777, at *3 (W.D. Wash. Sept. 25, 2007); *Brooktrout*, 2007 WL 1730112, at *2; *Martek*, 520 F. Supp. 2d at 558; *MPT*, 505 F. Supp. 2d at 420; *O2 Micro Int'l, Ltd.*

promoting innovation for public benefit, and the manner in which exclusive rights protected by injunctions support that role.

Several cases providing more extensive discussions of the public interest factor involve health care products. In a case finding that a generic drug infringed a patent held by a branded drug manufacturer, the court recognized a public interest in access to lower-priced generic drugs. However the court weighed that interest against the public's competing interest in "encouraging the massive investment in research and development that is required before a new drug can be developed and brought to market" and granted the injunction.⁹⁸ In *Amgen v. Hoffman-La Roche*, a matter involving a biologic drug, the district court collected extensive evidence related to the public interest prong and then granted the injunction. The court found that it was unclear whether the patented drug offered significant clinical advantages over non-infringing treatments, and whether market entry of an infringing product would lower Medicare costs. The court also determined that sale of an infringing drug would undermine incentives for innovation that the patent system is designed to protect.⁹⁹ The public interest in maintaining access to the infringing drug-eluting stent supported denial of an injunction in *Advanced Cardiovascular Systems*. Cardiologists had filed affidavits stating they preferred the infringing stents and expressed concern for the success of their surgeries if they were not available. The court also acknowledged the public's interest in competition in the stent market in this situation where the patentee had failed to establish irreparable harm.¹⁰⁰

A few cases have considered non-health related disruption to customers and the broader public under the public interest prong. In a case involving computer security software, the court noted that "computer security revolves around protecting highly sensitive information and. . .that a disruption in service would be an incredible disservice to the public. . .".¹⁰¹ However, it found that these arguments were insufficient to outweigh the public's interest in the enforcement of

v. Beyond Innovation Tech. Co., Ltd., 2007 WL 869576, at * 3 (E.D. Tex. March 21, 2007), *vacated*, 521 F.3d 1351 (Fed. Cir. 2008); Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc., Nos. 04-1689, 06-757, 06-5166, 2007 WL 869545, at *1 (D.N.J. March 20, 2007), *aff'd in part*, 520 F.3d 1358 (Fed. Cir. 2008); *Visto*, 2006 WL 3741891, at *5; Black & Decker, Inc. v. Robert Bosch Tool Corp., No. 04 C 7955, 2006 WL 3446144, at *5 (N.D. Ill. Nov. 29, 2006).

⁹⁸Sanofi-Synthelabo v. Apotex, Inc., 492 F. Supp. 2d 353, 397 (S.D.N.Y. 2007), *aff'd*, 530 F.3d 1075 (Fed. Cir. 2009).

⁹⁹Amgen, Inc. v. F. Hoffman-La Roche, Ltd., 581 F. Supp. 2d 160, 212-26 (D. Mass. 2008), *aff'd in part*, *vacated in part*, 580 F.3d 1340 (Fed. Cir. 2009).

¹⁰⁰*Advanced Cardiovascular Systems*, 579 F. Supp. 2d at 560-61 (D. Del. 2008).

¹⁰¹Finjan Software, Ltd. v. Secure Computing Corp., No. 06-369, 2009 WL 2524495, at *11 (D. Del. Aug. 18, 2009), *aff'd in part, rev'd in part*, 626 F.3d (Fed. Cir. 2010).

patent rights.¹⁰² In *z4*, defendant Microsoft argued that because its Windows operating system was ubiquitous, an injunction could flood the market with pirated software that could potentially threaten computer security and could harm sectors of the public including small computer manufacturers, retailers and, consumers.¹⁰³ The court concluded that although it was impossible to determine the actual effects of the two scenarios, even minor disruptions could harm the public, thus tipping this factor in favor of denying the injunction.¹⁰⁴ In *Broadcom*, the court found that it could ameliorate the disruption to cell phone service by delaying the start of the injunction in order to give the infringer time to design around the patent.¹⁰⁵ Another court concluded that narrowly tailoring the injunction will also mitigate harm to the public.¹⁰⁶

IV. List of Post-eBay Cases

This list includes opinions available on Westlaw as of March 31, 2010 . To compile this list, we searched for all cases citing eBay and limited the results to opinions discussing permanent injunctions in patent cases. We did not include preliminary injunction cases or cases involving other areas of the law such as trademark or copyright. In the period shortly after the Supreme Court issued its opinion in *eBay*, the Federal Circuit remanded cases back to the district court with instructions to perform a four factor analysis. We included the remand opinions. There are instances in which courts have made statements about the four factors in dictum when discussing other areas of patent cases such as willfulness or when discussing stays of permanent injunctions pending appeal of infringement verdicts. We did not include those cases on this list. Some cases turned on procedural or technical issues, such as standing and we did not include those cases on this list.

A. Post-eBay Cases in Which the Court Denied a Permanent Injunction

Advanced Cardiovascular Systems, Inc. v. Medtronic Vascular, Inc., 579 F. Supp. 2d 554 (D. Del. 2008)

Bard Peripheral Vascular, Inc. v. W.L. Gore & Associates, Inc., No. CV-03-0597, 2009 WL 920300 (D. Ariz. March 31, 2009)

¹⁰²*Id.*

¹⁰³*z4*, 434 F. Supp. 2d at 444.

¹⁰⁴*Id.* at 444-45.

¹⁰⁵*Broadcom*, 543 F.3d at 704. (“We agree that the sunset provisions mitigate the harm to the public and that the district court did not abuse its discretion in fashioning a remedy that protects Broadcom’s rights while allowing Qualcomm time to develop non-infringing substitutes.”).

¹⁰⁶*Transocean*, 2006 WL 3813778, at *7 (holding that a narrowly tailoring injunction would mitigate harm to public).

Boston Scientific Corp. v. Johnson & Johnson, No. C 02-0790, 2008 WL 5054955 (N.D. Cal. Nov. 25, 2008) (Ongoing Royalty Case)

Creative Internet Advertising Corp. v. Yahoo!, Inc., 674 F. Supp. 2d 847 (E.D. Tex. 2009)

Emcore Corp. v. Optium Corp., No. 7-326, 2010 U.S. Dist. LEXIS 3287 (W.D. Penn. Jan. 15, 2010), *decision reached on appeal*, 2011 U.S. App. LEXIS 1826 (Fed. Cir. Jan. 26, 2011).

Finisar Corp. v. DirecTV Group, No. 1:05-CV-264, 2006 U.S. Dist LEXIS 76380 (E.D. Tex. July 7, 2006), *aff'd in part*, 523 F.3d 1323 (Fed. Cir. 2008) (Federal Circuit vacated the district court's holding of injunction, part of its analysis regarding the validity of the patent, and remanded for new trial)

Hynix Semiconductor Inc. v. Rambus Inc., 609 F. Supp. 2d 951 (N.D. Cal. 2009)

Hypoxico Inc. v. Colo. Altitude Training, 630 F. Supp. 2d 319 (S.D.N.Y. 2009)

IGT v. Bally Gaming Int'l Inc., 675 F. Supp. 2d 487 (D. Del. 2009)

IMX, Inc. v. Lendingtree, L.L.C., 469 F. Supp. 2d 203 (D. Del. 2007), *on reconsideration in part*, No. 03-1067, 2007 WL 1232184 (D. Del. April 25, 2007).

Innogenics, N.V. v. Abbott Labs., 512 F.3d 1363 (Fed. Cir. 2008) (upholding lower court's grant of injunction based on payment of a market entry fee to compensate the patentee for loss of market power in the future)

Medtronic Sofamor Danek USA Inc. v. Globus Med., 637 F. Supp. 2d 290 (E.D. Pa. 2009)

Nichia Corp. v. Seoul Semiconductor, Ltd., No. 06-0162, 2008 WL 346416 (N.D. Cal. Feb. 7, 2008)

Paice LLC v. Toyota Motor Corp., No. 2:04-CV-211, 2006 WL 2385139 (E.D. Tex. Aug. 16, 2006), *aff'd in part, rev'd in part and remanded*, 504 F.3d 1293 (Fed. Cir. 2007) (Federal Circuit upheld the denial of the injunction and grant of on-going royalties but remanded for the court to do a better job on calculating those damages), *on remand at*, 609 F. Supp. 2d 620 (E.D. Tex. 2009) (District court increased the on-going royalties from \$25 per license to \$98 license)

Praxair Inc. v. ATMI, Inc., 479 F. Supp. 2d 440 (D. Del. 2007). In a later opinion patents were held unenforceable for inequitable conduct. *See* 489 F. Supp. 2d 387 (2007), *aff'd in part, rev'd in part*, 543 F.3d 1306 (Fed. Cir. 2008) (upholding the inequitable conduct finding for one patent and reversing the inequitable conduct and infringement decisions for a second, also vacating the finding of invalidity for a third patent)

Respirronics, Inc. v. Invacare Corp., No. 04-0336, 2008 WL 111983 (W.D. Pa. Jan. 8, 2008)

ResQNet.com, Inc. v. Lansa, Inc., 533 F. Supp. 2d 397 (S.D.N.Y. 2008), *aff'd in part, rev'd in part*, 594 F.3d 860 (Fed. Cir. 2010) (affirming patent valid and infringed; reversing and remanding damages decision; reversing imposition of Rule 11 sanctions)

Sundance Inc. v. DeMonte Fabricating Ltd., No. 02-73543, 2007 WL 37742 (E.D. Mich. Jan. 4, 2007). Patent declared invalid for obviousness by 550 F.3d 1356 (Fed. Cir. 2008).

Telcordia Tech., Inc. v. Cisco Sys., Inc., 592 F. Supp. 2d 727 (D. Del. 2009), *aff'd in part, vacated in part*, 612 F.3d 1365 (Fed. Cir. 2010)

Voda v. Cordis, No. CIV-03-1512, 2006 WL 2570614 (W.D. Okla. Sept. 5, 2006), *aff'd*, 536 F.3d 1311 (Fed. Cir. 2008)

z4 Technologies, Inc. v. Microsoft Corp., 434 F. Supp. 2d 437 (E.D. Tex. 2006)

B. Post-eBay Cases in Which the Court Granted a Permanent Injunction

3M Innovative Properties Co. v. Avery Dennison Corp., No. 01-1781, 2006 WL 2735499 (D. Minn. Sept. 25, 2006)

800 Adept, Inc. v. Murex Securities, Ltd., 505 F. Supp. 2d 1327 (M.D. Fla. 2007), *aff'd in part, vacated in part, and rev'd in part*, 539 F.3d 1354 (Fed. Cir. 2008), *rehearing and rehearing en banc denied*, (2008) (Federal Circuit held that trial court erred on claim construction on one set of claims and reversed the finding of infringement and vacated the injunction; Federal Circuit upheld jury's finding that a second set of patents were invalid except for two claims and remanded for new trial on those claims.)

Acticon Tech. v. Heisei Electronics Co., Ltd., No. 06-CV-4316, 2008 WL 356872 (S.D.N.Y. Feb. 5, 2008)

Acumed, LLC v. Stryker Corp., 483 F.3d 800 (Fed. Cir. 2007) (Federal Circuit remanded decision to district court to apply eBay factors); 2007 WL 4180682 (D. Ore. Nov. 20, 2007) (district court applied eBay factors and granted injunction), *aff'd*, 551 F.3d 1323 (Fed. Cir. 2008).

Allan Block Corp. v. E. Dillon & Co., 509 F. Supp. 2d 795 (D. Minn. 2007), *aff'd per curiam*, 287 Fed. Appx. 109 (Fed. Cir. 2008)

Amgen, Inc. v. F. Hoffman-La Roche Ltd., 581 F. Supp. 2d 160 (D. Mass. Oct. 2, 2008), *aff'd in part*, 581 F. Supp. 2d 160 (D. Mass. 2008) (Federal Circuit reversed some of findings of infringement and affirmed others and remanded; injunction undisturbed with instruction that district court can revisit scope on remand if appropriate.)

Arlington Industries, Inc. v. Bridgeport Fittings, Inc., No. 3:01-CV-0485, 2010 WL 817519 (M.D. Pa. March 9, 2010)

Atlanta Attachment Co. v. Leggett & Platt, Inc., No. 1:05-CV-1071, 2007 WL 5011980 (N.D. Ga. Feb. 23, 2007)

Baden Sports, Inc. v. Kabushiki Kaisha Molten, No. C06-210, 2007 WL 2790777 (W.D. Wash. Sept. 25, 2007)

Becton Dickinson & Co. v. Tyco Healthcare Group, LP, No. 02-1694, 2008 WL 4745882 (D. Del. Oct. 29, 2008)

Black & Decker Inc. v. Robert Bosch Tool Corp., No. 04 C 7955, 2006 WL 3446144 (N.D. Ill. Nov. 29, 2006), *aff'd in part, vacated in part*, 260 Fcd. Appx. 284 (Fcd. Cir. 2008) (The Federal Circuit overturned the district court's claim construction and remanded, rendering the initial grant of injunction moot.)

Broadcom Corp. v. Qualcomm Inc., 543 F.3d 683 (Fed. Cir. 2008)

Brooktrout, Inc. v. Eicon Networks Corp., No. 2:03-CV-59, 2007 WL 1730112 (E.D. Tex. June 14, 2007)

Callaway Golf Co. v. Acushnet Co., 585 F. Supp. 2d 600 (D. Del. 2008), *aff'd in part, vacated in part*, 576 F.3d 1331 (Fed. Cir. 2009) (The Federal Circuit reversed the district court's summary judgment ruling on anticipation and vacated the district court's finding on obviousness and remanded. The Federal Circuit did not rule on the district court's injunction decision.)

Commonwealth Scientific and Industrial Research Organisation v. Buffalo Technology Inc., 492 F. Supp. 2d 600 (E.D. Tex. 2007), *aff'd in part*, 542 F.3d 1363 (Fed. Cir. 2008) (Federal Circuit overturned the decision on willfulness and remanded).

Emory University v. Nova Biogenetics, No. 1:06-CV-0141, 2008 WL 2945476 (N.D. Ga. July 25, 2008)

Extreme Networks, Inc. v. Enterasys Networks, Inc., No. 07-cv-229, 2008 WL 4756498 (W.D. Wisc. Oct. 29, 2008); motion to modify injunction denied and motion to stay injunction granted by 2009 WL 679602 (D. Wisc. March 16, 2009), *vacated and remanded*, 395 Fed. Appx. 709 (Fed. Cir. 2010)

Finjan Software, Ltd. Secure Computing Corp., No. 06-369, 2009 WL 2524495 (D. Del. Aug. 18, 2009), *aff'd in part, rev'd in part*, 626 F.3d 1197 (Fed. Cir. 2010)

Flexiteek Ams., Inc. v. PlasTEAK, Inc., No. 08-60996, 2009 WL 2957310 (S.D. Fla. Sept. 15, 2009)

Fresenius Medical Care Holdings, Inc. v. Baxter Int'l, Inc., No. C 03-1431, 2008 WL 928496 (N.D. Cal. April 4, 2008), *aff'd in part, rev'd in part*, 582 F.3d 1288 (Fed. Cir. 2009) (injunction vacated because of validity decision)

Funai Elec. Co., Ltd. v. Daewoo Elec. Corp., 593 F. Supp. 2d 1088 (N.D. Cal. 2009), *aff'd*, F.3d 1357 (Fed. Cir. 2010)

i4i Ltd. Partnership v. Microsoft Corp., 670 F. Supp. 2d 5680 (E.D. Tex. 2009), *aff'd*, 589 F.3d 1246 (Fed. Cir. 2009) (affirmed grant of permanent injunction but increased the delay period before it started from 60 days to 5 months based on testimony supporting the time necessary for Microsoft to design around.), *superseded by*, 598 F.3d 831 (Fed. Cir. 2010), *cert. granted*, 79 U.S.L.W. 3326 (U.S. Nov. 29, 2010) (No. 10-29).

I-Flow Corp. v. Apex Medical Technologies, Inc., No. 07cv1200, 2010 WL 141402 (S.D. Tex. Jan. 8, 2010)

Johns Hopkins Univ. v. Datascopic Corp., 513 F. Supp. 2d 578 (D. Md. 2007), *rev'd and remanded*, 543 F.3d 1342 (Fed. Cir. 2008) (jury's finding of infringement was not supported by substantial evidence; reversed the district court's denial of JMOL and remanded for entry of judgment; injunction held moot)

Joyal Products, Inc. v. Johnson Elec. North Amer., Inc., No. 04-5172, 2009 WL 512156 (D. N.J. Feb. 27, 2009), *aff'd per curiam*, 335 Fed. Appx. 48 (Fed. Cir. 2009)

Kowalski v. Mommy Gina Tuna Resources, Nos. 05-00679, 05-00787, 06-00182, 2009 WL 856006 (D. Haw. March 30, 2009), *clarified by*, 2009 WL 1360695 (D. Haw. May 7, 2009)

Litecubes, LLC v. Northern Light Products, Inc., No. 4:04CV00485, 2006 WL 5700252 (E.D. Mo. Aug. 25, 2006), *aff'd*, 523 F.3d 1353 (Fed. Cir. 2008)

Mannatech, Inc. v. Glycoproducts Int'l, Inc., No. 3-06-CV-0471, 2008 WL 2704425 (N.D. Tex. July 9, 2008)

Martek Biosciences Corp. v. Nutrinova Inc., 520 F. Supp. 2d 537 (D. Del. 2007), *aff'd in part, rev'd in part*, 579 F.3d 1363 (Fed. Cir. 2009) (Federal Circuit affirmed the denial of JMOL for a finding of invalidity and non-infringement on some patent claims; reversed grant the JMOL finding invalidity on other patent claims; upheld the district court's claim construction).

Mass Engineered Design, Inc. v. Ergotron, Inc., 633 F. Supp. 2d 361 (E.D. Tex. 2009)

MGM Well Services Inc. v. Mega Lift Systems, LLC, 505 F. Supp. 2d 359 (S.D. Tex. 2007), *aff'd*, 264 Fed. Appx. 900 (Fed. Cir. 2008)

MPT, Inc. v. Marathon Labels, Inc., 505 F. Supp. 2d 401 (N.D. Ohio 2007), *rev'd in part*, 258 Fed. Appx. 318, (Fed. Cir. 2007) (Federal Circuit found injunction overly broad and remanded)

Muniauction, Inc. v. Thomson Corp., 502 F. Supp. 2d 477 (W.D. Pa. 2007), *rev'd in part*, 532 F.3d 1318 (Fed. Cir. 2008) (injunction vacated because Federal Circuit found some patent claims invalid for obviousness and other claims not infringed)

Novozymes A/S v. Genecor Int'l Inc., 474 F. Supp. 2d 592 (D. Del. 2007)

O2 Micro Int'l, Ltd. v. Beyond Innovation Technology Co., Ltd., No. 2-04-CV-32, 2007 WL 869576 (E.D. Tex. March 21, 2007), *rev'd*, 521 F.3d 1351 (Fed. Cir. 2008) (The Federal Circuit vacating the finding of infringement and the injunction and remanding)

Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc., Nos. 04-1689, 06-757, 06-5166, 2007 WL 869545 (D. N.J. March 20, 2007), *aff'd in part*, 520 F.3d 1358 (Fed. Cir. 2008)

Power Integrations, Inc. v. Fairchild Semiconductor Int'l, Inc., No. 04-1371, 2008 WL 5210843 (D. Del. Dec. 12, 2008), *motion for temporary stay granted by*, 2008 WL 5351038 (D. Del. Dec. 22, 2008)

Power-One, Inc. v. Artesyn Technologies, Inc., No. 2:05-CV-463, 2008 WL 1746636 (E.D. Tex. April 11, 2008), *aff'd*, 599 F.3d 1343 (Fed. Cir. 2010)

Rosco, Inc. v. Mirror Lite Co., No. CV-96-5658, 2006 WL 2844400 (E.D.N.Y. Sept. 29, 2006)

Sanofi-Synthelabo v. Apotex, Inc., 492 F. Supp. 2d 353 (S.D.N.Y. June 19, 2007), *aff'd*, 550 F.3d 1075 (Fed. Cir. 2008) (infringement and validity decision upheld), *cert. denied*, 130 S. Ct. 493 (2009) Preliminary injunction opinion: 488 F. Supp. 2d 317 (S.D.N.Y. 2006), *aff'd*, 470 F.3d 1368 (Fed. Cir. 2006)

Sensormatic Electronics Corp. v. Tag Co. U. S., 632 F. Supp. 2d 1147 (S.D. Fla. 2008), *aff'd*, 2010 WL 565606 (Fed. Cir. Feb. 17, 2010) (non-precedential opinion)

Smith & Nephew, Inc. v. Synthes, 466 F. Supp. 2d 978 (W.D. Tenn. 2006)

Spectrlytics, Inc. v. Cordis Corp., 650 F. Supp. 2d 900 (D. Minn. 2009)

Telequip Corp. v. The Change Exchange, No. 5:01-CV-1748, 2006 WL 2385425 (N.D.N.Y. Aug. 15, 2006)

TiVo v. Echostar Commc'n Corp., 446 F. Supp. 2d 664 (E.D. Tex. 2006), *aff'd in part, rev'd in part*, 516 F.3d 1290 (Fed. Cir. 2008) (Federal Circuit overturned the infringement decision with respect to hardware claims and upheld the infringement decision with respect to software claims.)

Trading Technologies Int'l, Inc. v. eSpeed, Inc., No. 04 C 5312, 2008 WL 4531371 (N.D. Ill. March 22, 2008), *aff'd*, 595 F.3d 1340 (Fed. Cir. 2010)

Transamerica Life Ins. Co. v. Lincoln National Life Ins. Co., 625 F. Supp. 2d 702 (N.D. Iowa 2009)

Transocean Offshore Deepwater Drilling, Inc. v. GlobalSanteFe, No. H-03-2910, 2006 WL 3813778 (S.D. Tex. Dec. 27, 2006)

TruePosition, Inc. v. Andrew Corp., 568 F. Supp. 2d 500 (D. Del. 2008) (post-judgment interest order amended by 2009 WL 192470 (D. Del. Jan. 27, 2009)).

U.S. Philips Corp. v. KXD Technology, Inc., No. CV 05-8953, 2007 WL 4984150 (C.D. Cal. Sept. 7, 2007)

U.S. Philips Corp. v. Iwasaki Electric Co., Ltd., 607 F. Supp. 2d 470 (S.D.N.Y. 2009)

Verizon Servs. Corp. v. Vonage Holdings Corp., 503 F.3d 1295 (Fed. Cir. 2007)

Visto Corp. v. Seven Networks, Inc., No. 2:03-CV-333, 2006 WL 3741891 (E.D. Tex. Dec. 19, 2006)

Wald v. Mudhopper Oilfield Servs., No. CIV-04-1693, 2006 WL 2128851 (W.D. Okla. July 27, 2006)

Zen Design Group, Ltd. v. Clint, No. 08-cv-14309, 2009 WL 4050247 (E.D. Mich. Nov. 23, 2009)

V. Questionnaire Used in Malin Study

SURVEY OF EBAY INJUNCTION FACTORS

CASE NAME:	DECISION DATE:
CITATION:	JUDGE:
COURT:	FIRM NAME:
REVIEWER:	

INJUNCTION REQUESTED:

PERMANENT PRELIMINARY

DISPOSITION:

GRANTED DENIED

PATENTEE	Yes	No	N/A	Weight*	Ebay Factor**
Delay in Bringing Suit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Practicing Patentee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Direct Competitor to Defendant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Patentee's Only/Primary Product	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Lost Mkt. Share/Sales Linked to Infringement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Limited/Small Customer Base	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Likely Price Erosion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Nascent/Developing Market	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Critical/Developing Time for Patentee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
"Sticky"/Loyal Customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Licensing Others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Offered License to Defendant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Refused License to Defendant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Only Asserting Harm On Behalf of Licensees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Patentee's Reputation Harmed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4

ALLEGED INFRINGER	Yes	No	N/A	Weight*	Ebay Factor**
Willful Infringement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Voluntarily Offer to Avoid Future Infringement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Impact on Defendant's Business/Product Line	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Inexpensive Noninfringing Alternatives Available	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Invention a Trivial Component	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Product at Core of Defendant's Business	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Minor Impact on Infringer's Sales	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Compliance w/ Injunction Easy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4

EFFECT ON THIRD PARTIES	Yes	No	N/A	Weight*	Ebay Factor**
Harm to Defendant's Employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Harm to Defendant's Customers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Product Ubiquitous/Relied on by Public	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Health Concern Implicated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4
Product for Entertainment Only	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	0 1 2 3	1 2 3 4

* 0=Treated as Irrelevant; 1=Mentioned But Not Very Significant; 2=Average; 3=Material to Holding

** 1=Irreparable Harm; 2=Adequacy of Damages; 3=Balance of Hardships; 4=Public Interest

APPENDIX C
HEARING PARTICIPANTS

Participants in the FTC Hearings on
the Evolving Intellectual Property Marketplace¹

Participant	Hearing Date
Keith Agisim Associate General Counsel for Global Intellectual Property, Bank of America	February 11, 2009
John A. Amster Co-CEO, RPX Corp.	May 4, 2009
Robert A. Armitage Senior Vice President and General Counsel, Eli Lilly & Co.	February 12, 2009 March 19, 2009
Ashish Arora Professor of Strategy, Fuqua School of Business, Duke University (visiting) H. John Heinz, III Professor of Economics, Innovation and Economic Development, Carnegie Mellon University (on leave)	March 19, 2009
George E. Badenoch Partner, Kenyon & Kenyon, LLP	February 12, 2009
Christine P. Bellon Vice President of Intellectual Property & Legal Affairs, Hydra Biosciences	March 18, 2009
Keith Bergelt Chief Executive Officer, Open Invention Network	April 17, 2009
James E. Bessen Lecturer in Law, Boston University School of Law; Director, Research on Innovation	March 19, 2009

¹Full transcripts of all the hearing testimony, agendas describing these hearings, biographies of the panelists and speakers, and related materials are available at <http://www.ftc.gov/bc/workshops/ipmarketplace>.

Participant	Hearing Date
Earl (Eb) Bright General Counsel and Vice President, Intellectual Property, Exploramed	May 4, 2009
Bruce W. Burton Senior Managing Director, FTI Consulting, Inc.	February 11, 2009
Dan L. Burk Chancellor's Professor of Law, University of California Irvine School of Law	May 5, 2009
Bernard J. Cassidy General Counsel and Senior Vice President, Tessera Technologies, Inc.	February 12, 2009
Yar R. Chaikovsky Partner, Sonnenschein Nath & Rosenthal, LLP	May 5, 2009
Henry Chesbrough Adjunct Professor, Haas School of Business, U.C. Berkeley; Executive Director, Center for Open Innovation	May 4, 2009
Robert A. Clarke Director, Office of Patent Legal Administration, Patent & Trademark Office	March 19, 2009
Iain Cockburn Professor of Finance and Economics and Everett W. Lord Distinguished Faculty Scholar, Boston University School of Management	April 17, 2009
Thomas F. Cotter Briggs and Morgan Professor of Law, University of Minnesota Law School	December 5, 2008 February 11, 2009
Christopher A. Cotropia Associate Professor of Law, University of Richmond School of Law	March 19, 2009
Timothy Crean Chief Intellectual Property Officer, SAP AG	May 4, 2009
Marcus Delgado Chief IP Counsel, Cox Communications, Inc.	April 17, 2009

Participant	Hearing Date
Peter N. Detkin Founder & Vice Chairman, Intellectual Ventures, Inc.	December 5, 2008
Dianna L. DeVore Partner, Virtual Law Partners LLP	May 4, 2009
Q. Todd Dickinson Executive Director, American Intellectual Property Law Association	December 5, 2008
Mary E. Doyle Senior Vice President and General Counsel, Palm, Inc.	May 5, 2009
John F. Duffy Oswald Symister Colclough Research Professor of Law, George Washington University Law School	December 5, 2008
Daralyn J. Durie Partner, Durie Tangri Page Lemley Roberts & Kent LLP	May 5, 2009
Rebecca S. Eisenberg Robert and Barbara Luciano Professor of Law, University of Michigan Law School	May 4, 2009
Ron Epstein CEO, IPotential, LLC	May 4, 2009
Richard J. Gilbert Professor of Economics and Professor of the Graduate School (Emeritus), University of California, Berkeley	May 5, 2009
John M. Golden Assistant Professor, University of Texas School of Law	February 12, 2009
Stuart Graham Assistant Professor of Strategic Management, Georgia Institute of Technology	April 17, 2009
Gary Griswold President and Chief IP Counsel, 3M Innovative Properties (retired)	March 18, 2009

Participant	Hearing Date
Horacio Gutierrez Corporate VP & Deputy General Counsel, Microsoft Corporation	May 4, 2009
Bronwyn Hall Professor of Economics, U.C. Berkeley; Professor of Economics of Technology and Innovation, University of Maastricht	May 4, 2009
Sarah T. Harris Vice President and Chief Counsel Intellectual Property, AOL	March 18, 2009
Steven J. Hoffman CEO, ThinkFire	April 17, 2009
Carl B. Horton Chief Intellectual Property Counsel, General Electric Co.	March 18, 2009
Robert Hunt, Ph.D. Assistant Vice President, Federal Reserve Bank of Philadelphia	March 19, 2009
Paul M. Janicke HIPLA Professor of Law, University of Houston Law Center	February 11, 2009
Steven C. Jensen Partner, Knobbe Martens Olson & Bear, LLP	March 18, 2009
Philip S. Johnson Chief Intellectual Property Counsel, Johnson & Johnson	February 11, 2009
Brian Kahin Senior Fellow, Computer & Communications Industry Association	December 5, 2008
David J. Kappos Vice President and Assistant General Counsel, Intellectual Property Law and Strategy, IBM Corp.	March 19, 2009
Ron D. Katzenbach, Ph.D. President, Bi-Level Technologies	March 18, 2009

Participant	Hearing Date
Joe E. Kiani Chief Executive Officer and Chairman of the Board of Directors, Masimo Corp.	March 18, 2009
F. Scott Kieff Professor, Washington University School of Law; Senior Fellow, Hoover Institution	March 19, 2009
William E. Kovacic Chairman, Federal Trade Commission	December 5, 2008
Noreen Krall Vice President and Chief IP Counsel, Intellectual Property Law, Sun Microsystems, Inc.	March 18, 2009
Stephen G. Kunin Partner, Oblon, Spivak, McClelland, Maier & Neustadt, P.C.	March 19, 2009
Jeffrey P. Kushan Partner, Sidley and Austin LLP	December 5, 2008
Jack Lasersohn Partner, The Vertical Group; Member, Board of Directors, National Venture Capital Association	February 11, 2009
Anne Layne-Farrar Director, LECG, LLP	February 11, 2009 February 12, 2009
Michelle K. Lee Associate General Counsel and Head of Patents and Patent Strategy, Google Inc.	May 5, 2009
Mark A. Lemley William H. Neukom Professor of Law, Stanford Law School; Director, Stanford Program in Law, Science and Technology	April 17, 2009 May 5, 2009
Dr. Gregory K. Leonard Senior Vice President, NERA Economic Consulting	February 11, 2009

Participant	Hearing Date
Aron Levko Principal, PricewaterhouseCoopers	February 11, 2009
Gail Levine Assistant General Counsel, Verizon Communications Inc.	February 11, 2009
Gary H. Loeb Vice President, Intellectual Property, Genentech	February 11, 2009 February 12, 2009
Bryan Lord Vice President, Finance and Licensing and General Counsel, Amberwave Systems Corp.	February 11, 2009
Douglas B. Luftman Associate General Counsel of Intellectual Property, Palm, Inc.	February 12, 2009
Richard J. (“Chip”) Lutton Jr. Chief Patent Counsel, Apple Computer, Inc.	May 4, 2009
Taraneh Maghamé Vice President, Patent Policy & Government Relations Counsel, Tessera Technologies, Inc.	February 11, 2009
Steven C. Malin Counsel, Sidley & Austin, LLP	February 12, 2009
James E. Malackowski President & Chief Executive Officer, Ocean Tomo, LLC	April 17, 2009
Kenneth M. Massaroni Senior Vice President and General Counsel, Seagate Technology	February 12, 2009
Daniel P. McCurdy Chief Executive Officer, Allied Security Trust; Chairman, PatentFreedom, LLC	December 5, 2008
The Honorable Roderick R. McKelvie Partner, Covington & Burling; formerly Judge, United States District Court for the District of Delaware	December 5, 2008

Participant	Hearing Date
John T. McNelis Partner and Chair of the Patent Group, Fenwick and West	May 5, 2009
Peter S. Menell Professor of Law, U.C. Berkeley Boalt Hall School of Law; Director, Berkeley Center for Law and Technology	May 5, 2009
Robert P. Merges Wilson Sonsini Goodrich & Rosati Professor of Law and Technology, U.C. Berkeley Boalt Hall School of Law; Director, Berkeley Center for Law & Technology	May 4, 2009
Michael V. Messinger Director, Sterne, Kessler, Goldstein & Fox	March 19, 2009
Michael Meurer Michaels Faculty Research Scholar and Professor of Law, Boston University School of Law	December 5, 2008
Christine Meyer Vice President, NERA Economic Consulting	February 12, 2009
The Honorable Paul R. Michel Chief Judge, Court of Appeals for the Federal Circuit (retired)	December 5, 2008
Raymond Millien founder, PCT Companies and CEO, PCT Capital, LLC	December 5, 2008
Joseph S. Miller Associate Professor, Lewis & Clark Law School; Visiting Associate Professor, University of Georgia Law School	December 5, 2008
Steven W. Miller Vice President & General Counsel - Intellectual Property, The Procter & Gamble Company	March 18, 2009
Carol Mimura Assistant Vice Chancellor for Intellectual Property & Industry Research Alliances (IPIRA), University of California, Berkeley	May 4, 2009

Participant	Hearing Date
Jeffrey Myers Vice President and Assistant General Counsel, Intellectual Property Enforcement, Pfizer, Inc.	March 18, 2009
Vern Norviel Partner, Wilson Sonsini Goodrich & Rosati	May 5, 2009
Vince O'Brien Managing Partner, OSKR, LLC	May 5, 2009
Lee Petherbridge Associate Professor of Law, Loyola Law School, Los Angeles	May 5, 2009
Marshall Phelps Corporate Vice President for IP Policy and Strategy, Microsoft Corporation	May 4, 2009
Richard F. Phillips Chief Attorney, Technology, ExxonMobil Chemical Company	March 18, 2009
Laura G. Quatela Chief Intellectual Property Officer & Vice President, Eastman Kodak Co.	April 17, 2009
Arti K. Rai Elvin R. Latty Professor of Law, Duke University School of Law	March 19, 2009
Teresa Stanek Rea Partner, Crowell & Moring, LLP	March 19, 2009
Edward R. Reines Partner, Weil, Gotshal & Manges, LLP	February 11, 2009
Kevin H. Rhodes President and Chief Intellectual Property Counsel, 3M Innovative Properties Co.	February 11, 2009 February 12, 2009
Kevin G. Rivette Chair, PTO Patent Public Advisory Committee	May 5, 2009

Participant	Hearing Date
The Honorable Sue L. Robinson Judge, United States District Court for the District of Delaware	February 11, 2009
Alexander H. Rogers Senior Vice President and Legal Counsel, Qualcomm Inc.	March 18, 2009
William C. Rooklidge Partner, Howrey, LLP	May 5, 2009
Paul Ryan Chairman & CEO, Acacia Research	April 17, 2009
Matthew M. Sarboraria Senior Patent Counsel, Oracle Corporation	March 18, 2009
Jason Schultz Acting Director, Samuelson Law, Technology & Public Policy Clinic, U.C. Berkeley Boalt Hall School of Law	May 5, 2009
John W. Schlicher Attorney, Lafayette, California	May 5, 2009
Herbert F. Schwartz Adjunct Professor of Law, University of Pennsylvania Law School and New York University Law School; Partner, Ropes & Gray, LLP (retired)	March 19, 2009
Maggie Shafmaster Senior Vice President & Chief Patent Counsel, Genzyme Corp.	March 18, 2009
Suzanne M. Shema Senior Vice President, General Counsel and Corporate Compliance Officer, ZymoGenetics, Inc.	May 4, 2009
David Simon Chief Patent Counsel, Intel Corporation	February 11, 2009
P. Martin Simpson, Jr. Managing Counsel - Business and Land Use, Office of General Counsel, University of California	May 5, 2009

Participant	Hearing Date
Steven D. Singer Partner, WilmerHale Chair, Technology Transactions and Licensing Practice Group and Co-Chair, Life Sciences Group	March 18, 2009
John M. Skenyon Principal, Fish & Richardson P.C.	February 11, 2009
Russ Slifer Chief Patent Counsel, Micron Technology, Inc.	March 18, 2009
Henry E. Smith Professor, Harvard Law School	February 12, 2009
Jon Soderstrom, Ph.D. Managing Director, Office of Cooperative Research, Yale University	March 18, 2009
Alex Sousa Counsel, Innovalight, Inc.	May 4, 2009
Christopher J. Sprigman Associate Professor, University of Virginia School of Law	February 12, 2009
John A. Squires Chief Intellectual Property Counsel, Goldman Sachs & Co.	December 5, 2008
Jennifer M. Stec Intellectual Property Counsel, Ford Global Technologies	March 18, 2009
Scott Stern Associate Professor of Management and Strategy, Kellogg School of Management, Northwestern University	March 19, 2009
Henry Su Partner, Howrey, LLP	February 12, 2009
John R. Thomas Professor of Law, Georgetown University Law Center	December 5, 2008

Participant	Hearing Date
Tracey R. Thomas Chief IP Strategist and License Negotiator, American Express Co.	April 17, 2009
E. Earle Thompson Vice President and Chief Intellectual Property Counsel, SanDisk Corp.	May 4, 2009
John Thorne Senior Vice President and Deputy General Counsel, Verizon Communications Inc.	March 18, 2009
Marian Underweiser Intellectual Property Law Counsel, IBM	February 11, 2009
Duane R. Valz VP & Associate General Counsel, Global Patents, Yahoo!	December 5, 2008
Lee VanPelt VanPelt, Yi & James, LLP	May 4, 2009
Samson Vermont Assistant Professor of Law, George Mason University School of Law	April 17, 2009
Polk Wagner Professor of Law, University of Pennsylvania School of Law	April 17, 2009
Donald R. Ware Partner, Foley Hoag, LLP	February 12, 2009
Stuart L. Watt Vice President, Law & Intellectual Property Officer, Amgen, Inc.	May 4, 2009
Thomas G. Woolston Chief Executive Officer, MercExchange, LLC	March 18, 2009
Mallun Yen Vice President, Worldwide Intellectual Property, Cisco Systems, Inc.	December 5, 2008

Participant	Hearing Date
Rosemarie Ziedonis Assistant Professor of Strategy, Stephen M. Ross School of Business, University of Michigan and Co-Director, Program in Law, Economics, and Technology, Michigan Law	May 4, 2009

**Participants on Selected Panels from the
May 26, 2010 FTC/DOJ/PTO Workshop on the
Intersection of Competition Policy and Patent Policy:
Implications for Promoting Innovation²**

William Barr

former General Counsel, Verizon Communications, Inc.

Bernard J. Cassidy

Executive Vice President and General Counsel, Tessera Technologies, Inc.

Mark Chandler

Senior Vice President & General Counsel, Cisco Systems

Colleen Chien

Assistant Professor of Law, Santa Clara Law

Joseph Farrell

Director, Bureau of Economics, Federal Trade Commission

Patrick Gallagher

Director, National Institute of Standards & Technology, U.S. Department of Commerce

Stuart Graham

Chief Economist, U.S. Patent and Trademark Office

Brian Kahin

Senior Fellow, Computer & Communications Industry Association

²The listed participants took part in the three panels held of the workshop that explored issues discussed in this report: Panel 2 – Permanent Injunctions in the District Courts and ITC; Panel 3 – Standard Setting, Patent Rights, and Competition Policy; and the Wrap-Up Discussion panel. A full transcript from the workshop, an agenda, and biographies of the panelists are available at <http://www.ftc.gov/bc/workshops/ipmarketplace>.

Alice A. Kipel

Partner, Steptoe & Johnson, LLP

Anne Layne-Farrar

Director, LECG

Amy A. Marasco

General Manager, Standards Strategy, Microsoft Corp.

Stanford McCoy

Assistant U.S. Trade Representative for Intellectual Property and Innovation,
Office of the U.S. Trade Representative, Executive Office of the President

Christine McDaniel

Economic Adviser to Chairman Shara L. Aranoff,
U.S. International Trade Commission

Douglas A. Melamed

Senior Vice President & General Counsel, Intel Corp.

Carl Shapiro

Deputy Assistant Attorney General for Economic Analysis, Antitrust Division,
U.S. Department of Justice

Emily Ward

Vice President and Deputy General Counsel, eBay, Inc.

APPENDIX D
PUBLIC COMMENTS AND PRESENTATIONS AT HEARINGS

Public Comments³

Name	Comment Date
Acacia Research Corporation (Ryan, Paul)	May 14, 2009
American Intellectual Property Law Association (Crowne, Jim)	May 18, 2009
Biotechnology Industry Organization (DiLenge, Tom)	May 15, 2009
Choate, Pat	February 3, 2009
Coalition for Patent Fairness (Pincus, Andrew)	February 5, 2009
Cochran, William	February 5, 2009
Computer & Communications Industry Association (Schruers, Matthew)	February 5, 2009
Craig, Barbara	November 10, 2008
Dolak, Lisa	February 3, 2009
Durdik, Paul	February 4, 2009
Furstenwerth, Greg	December 2, 2008
IBM Corporation (Mortinger, Alison)	February 12, 2009
Innovation Alliance (Thomas, Eric)	February 6, 2009

³All public comments submitted to the FTC during the course of this project are available at <http://www.ftc.gov/bc/workshops/ipmarketplace>.

Name	Comment Date
Jones, Nathan	November 17, 2009
Kidder, Douglas	May 15, 2009
Lass, Stanley	February 4, 2009
Licensing Executives Society USA and Canada (Painchaud, Francois)	May 14, 2009
Licensing Executives Society USA and Canada (Painchaud, Francois)	May 15, 2009
Martin, Michael	May 15, 2009
Masse, Benjamin	February 5, 2009
Morgan, Paul	December 11, 2008
Morgan, Paul F.	January 12, 2009
Morgan, Paul F.	February 24, 2009
NanoBusiness Alliance (Murdock, Sean)	February 5, 2009
Nordin, Miles	March 29, 2009
NERA Economic Consulting (Leonard, Gregory)	March 9, 2009
Pharmaceutical Research and Manufacturers of America (Tauzin, Billy)	February 10, 2009
Prakash-Canjels, Gauri	April 16, 2009
Quillen, Cecil (Four comments submitted)	February 5, 2009
Rearden LLC (Perlman, Steve)	February 5, 2009

Name	Comment Date
Schlischer, John	May 15, 2009
Shane, Scott	February 5, 2009
Software & Information Industry Association (Kupferschmid, Keith)	February 5, 2009
Strategic Advisory Group (Mattathil, George)	November 12, 2008
Sun Microsystems, Inc. (Anastasio, Michael)	February 5, 2009
Trainor, Nuala	May 15, 2009
Verizon Communications Inc. (Levine, Gail)	March 20, 2009
Verizon Communications Inc. (Levine, Gail)	May 15, 2009
Vertical Group on behalf of the National Venture Capital Association (Lasersohn, Jack)	March 6, 2009
Wi-Lan Inc.	February 5, 2009
Wisconsin Alumni Research Foundation (Gulbrandsen, Carl)	May 15, 2009
Wren, Stephen	February 4, 2009
Wren, Stephen	February 5, 2009

Panelist Presentations at the Hearings⁴

Keith Agism, *Study of the Evolving IP Marketplace*, (June 9, 2009)

Ashish Arora, *Markets for Technology and the Division of Innovative Labor: A View from the Ivory Tower* (March 19, 2009)

James Bessen, *Patent Notice and Markets for Technology* (March 19, 2009)

Henry Chesbrough, *Specialisation and Markets for IP* (May 4, 2009)

Iain M. Cockburn, *Licensing: A View from the Trenches (Selected findings from the LES Foundation Surveys)* (April 2009)

Thomas Cotter, *Remedies for Patent Infringement: Theory and Practice* (December 5, 2008)

Peter Detkin, *To Promote the Progress...of Useful Arts: Investing in Invention* (December 5, 2008)

Q. Todd Dickinson, *Federal Trade Commission Workshop: Recent and Proposed Changes in Remedies Law* (December 5, 2008)

Stuart Graham, *Patents and Technology Markets: How is the Market Operating, and Can it be Improved?* (April 17, 2009)

Bronwyn Hall, *FTC Panel on Markets for IP and Technology* (May 4, 2009)

Robert Hunt, *The Federal Trade Commission's Hearing on "The Evolving IP Marketplace"* (March 19, 2009)

Paul Janicke, *Patent Damages* (February 2009)

Brian Kahin, *The Patent Ecosystem in IT: Business Practice and Arbitrage* (December 5, 2008)

Ron D. Katzenbach, *"The Evolving IP Marketplace" Hearings on the Operation of IP Markets* (March 18, 2009)

F. Scott Kieff, *The Importance of Marinating on Patents* (March 19, 2009)

Mark A. Lemley, *Ignoring Patents; How to Make a Patent Market* (April 17, 2009)

Aron Levko, *2009 Patent Damages Study- Preliminary Results* (February 11, 2009)

Bryan P. Lord, *Hearing on Patent Damages* (February 11, 2009)

James E. Malackowski, *FTC Hearings on Developing Business Models and a National IP Economic Infrastructure* (April 17, 2009)

⁴All written presentations and materials provided by the panelists at the hearings are available at <http://www.ftc.gov/bc/workshops/ipmarketplace>.

Steve Malin, *Empirical Analysis of Permanent Injunction Decisions Following eBay* (February 12, 2009)

Daniel P. McCurdy, *Unique Operating Companies Involved in Patent Litigation with NPEs; Patent Litigation Involving NPEs and Operating Companies* (December 5, 2008)

Hon. Roderick R. McKelvie, *Seagate Plus One: How the District Courts are Implementing Seagate; Seagate Plus One (Article)* (December 5, 2009)

Robert Merges, *The Evolving IP Marketplace* (May 4, 2009)

Joseph Scott Miller, *Testimony of Professor Joseph Scott Miller, Lewis & Clark Law School-Legal Doctrines That Affect the Value and Licensing of Patents (Panel 3)* (December 5, 2008)

Raymond Millien, *The IP Marketplace Players*, (December 5, 2008)

John W. Schlicher, *Comments on Patent Damages, Injunctions, Recent Supreme Court Patent Decisions, and Other Issues Identified in the Notice of Hearings on the Intellectual Property Marketplace* (May 16, 2009)

Suzanne M. Shema, *The Need for Distinct Claims* (May 4, 2009)

John A. Squires, *Patent Remedies: Can Quanta Finish What eBay Started?* (December 5, 2008)

Scott Stern, *The Impact of the Patent System on the Market for Technology* (March 19, 2009)

Jay Thomas, *Patent Damages: Principles and Current Problems* (December 5, 2008)

Marian Underweiser, *Towards an Efficient Market for Innovation* (February 11, 2009)

Duane R. Valz, *Yahoo! Inc. - FTC Hearing on The Evolving IP Marketplace* (December 5, 2008)

R. Polk Wagner, *Patent Portfolios [Written]; Understanding Patent Quality Mechanisms* (January 6, 2009)

Donald R. Ware, *Introductory Remarks and Presentation* (February 12, 2009)

Mallun Yen, *Cisco Systems, Inc. FTC Hearing on the Evolving IP Marketplace* (December 5, 2008)

Rosemarie Ziedonis, *Startups as Sources of New Technologies...and Patents* (May 4, 2009)

APPENDIX E
ANNOUNCED AGENDA TOPICS FOR THE FTC HEARINGS ON
THE EVOLVING IP MARKETPLACE⁵

KICKOFF HEARING
(December 5, 2008)

Opening Remarks: William Kovacic, Chairman, Federal Trade Commission

Panel 1: Developing Business Models

Some of the most significant recent changes in markets for intellectual property have occurred through the emergence of new business models involving the buying, selling and licensing of patents. The first panel will discuss the operation of emerging business models, aspects of the patent system that support those models, and industry responses. The panel will also explore the implications these developing business models have for patent valuation and licensing.

Keynote Address: The Honorable Paul R. Michel, Chief Justice, Court of Appeals for the Federal Circuit

Panel 2: Recent and Proposed Changes in Remedies Law

This panel will explore recent and proposed changes in remedies law, their impact on innovation and consumers, and the use of economic analysis in determining remedies. Among other topics, the panel will consider: what economic evidence is relevant when analyzing whether to grant a permanent injunction; whether the legal rules governing patent damages result in awards that appropriately compensate patentees; and whether changes in willfulness doctrine have altered the behavior of patentees and potential infringers.

Panel 3: Legal Doctrines That Affect the Value and Licensing of Patents

In the third panel, participants will examine changes in legal doctrines that affect the value and licensing of patents brought about by recent Supreme Court cases on obviousness, declaratory judgment and exhaustion. The panel will also discuss the role of unpredictability and notice in the IP marketplace.

⁵Agendas describing the topics covered at the hearings and other materials related to the hearings (including full transcripts of testimony, lists of witnesses, etc.) are available at <http://www.ftc.gov/bc/workshops/ipmarketplace>.

DAMAGES
(February 11, 2009)

Panel 1: Standards for Assessing Patent Damages and Their Implementation by Courts

This panel will discuss trends in damage awards, the current standards governing patent damages, and their impact on patent value and innovation. It will examine various approaches to damages calculation and the evidence used in assessing damages, particularly in the context of reasonable royalty determinations. Policy concerns relating to the calculation of reasonable royalties and potential reforms will also be addressed.

Keynote Address: The Honorable Sue L. Robinson, United State District Court for the District of Delaware

Panel 2: Industry Roundtable Discussion

This panel, structured as an industry roundtable, will explore how patent damages affect licensing, business strategies, and innovation in various sectors of the economy. In particular, it will consider whether damage awards in patent cases result in awards that promote innovation. Panelists will examine various proposals to revise the standards for damage determinations and discuss how such changes would impact their industries.

PERMANENT INJUNCTIONS & WILLFULNESS
(February 12, 2009)

Panel 1: Changes in Injunction Law

This panel will explore permanent injunctions in patent cases in the wake of the Supreme Court's *eBay* decision. It will examine the ways the courts have analyzed whether to grant or deny injunctions, including the role of economic evidence in that analysis, and any trends that have developed. Panelists will consider the implications of these developments for innovation, competition, and consumer welfare.

Panel 2: Industry Roundtable Discussion

This panel will explore recent changes in injunction law and willfulness standards, and their impact on innovation, licensing and business strategies. Among other topics, the panel will consider the impact of the *eBay* decision on patent valuation and licensing; whether the changes in the willfulness doctrine have altered the behavior of patentees and potential infringers; how these court decisions have changed investment in R&D; and how changes in remedies law have implicated incentives to bring, defend or settle patent suits.

INDUSTRY ROUNDTABLES
(March 18, 2009)

Four panels featuring representatives from universities and entrepreneurs, the IT and electronics industries, manufacturing and diversified companies, and the life sciences will examine the operation of IP and technology markets and the impact of patent policies on those markets. Panelists will discuss the factors they consider in determining how to use patents in the IP marketplace, for instance, whether to enforce exclusivity or enter licensing agreements. The panels will consider whether these markets operate efficiently and transparently, and what could be done to improve their operation. The effect of recent Supreme Court decisions and uncertainty in the patent system will be discussed, as will experience with the patent system's notice function.

THE OPERATION OF IP MARKETS AND THE NOTICE FUNCTION OF PATENTS
(March 19, 2009)

Keynote Address: **Herbert F. Schwartz, Former Partner, Ropes & Gray and Adjunct Professor, University of Pennsylvania and New York University Law Schools**

Panel 1: Economic Perspectives on IP and Technology Markets

Panelists will examine how patents facilitate technology transfer, whether markets for technology and IP operate efficiently and transparently, and what could be done to improve their operation. The effect of recent Supreme Court decisions on licensing decisions will be discussed.

Panel 2: Fulfilling the Patent System's Public Notice Function

Experts from academia and the bar will address the extent to which the patent system adequately fulfills its notice function – for example, ensuring that the firms seeking to develop and introduce innovative technologies can obtain clear and reliable information regarding the existence and scope of patent rights that could cover those technologies. Specifically, panelists will consider how various patent law doctrines or procedural aspects of the system affect notice, including (1) legal standards such as rules of claim construction and standards governing indefiniteness, written description, and enablement, and (2) examination practice and procedures, including notice available from the information that applicants are required to supply during the examination process, the information provided by examiners in allowing claims, the use of continuing applications, and the publication of applications and evolving claims.

MARKETS FOR INTELLECTUAL PROPERTY
(April 17, 2009)

Keynote Address: James E. Malackowski, President & CEO, Ocean Tomo

Panel 1: Roundtable Discussion

Some of the most significant recent changes in markets for intellectual property have occurred through the emergence of new business models involving the buying, selling and licensing of patents. This panel will discuss valuing and monetizing patents, strategies for buying and selling patents, and the role of secondary markets for intellectual property.

Panel 2: Recent Scholarship in Patent Markets

As markets for intellectual property have developed and evolved, so has the scholarship analyzing them. This panel will showcase some of the recent academic thinking about the development and functioning of markets for intellectual property and the policy implications surrounding them.

THE IP MARKETPLACES IN THE LIFE SCIENCES AND IT INDUSTRIES
(May 4, 2009 Berkeley, CA)

Panels 1 & 2: Industry Roundtable Discussions

Panels 1 and 2 will examine the operation of IP and technology markets in the life sciences and IT industries, respectively: how and why companies buy, sell and license patents; how patents support innovation and technology transfer; what aspects of the patent system create difficulties when seeking freedom to operate; and how the potential of patent litigation affects the operation of IP markets.

Panel 3: Markets for IP and Technology: Academic Perspectives

Panelists will examine how patents facilitate technology transfer, whether markets for technology and IP operate efficiently and transparently, and what could be done to improve their operation.

THE NOTICE FUNCTION OF PATENTS AND PATENT REMEDIES
(May 5, 2009 Berkeley, CA)

Panel 1: The Notice Function of Patents

Experts from academia and the bar will address the extent to which the patent system adequately fulfills its notice function, for example, ensuring that firms seeking to develop or license innovative technologies can obtain clear and timely information regarding the existence and scope of relevant patents and patent applications. Specifically, panelists will consider how various patent law doctrines and patent examination procedures affect notice, including (1) legal standards such as rules of claim construction and standards governing indefiniteness, written description, and enablement, and (2) examination practices and procedures, including notice available from information supplied by applicants and examiners, the use of continuing applications, and the publication of applications. Panelists will also discuss the extent to which the sheer number of potentially relevant patents and patent applications hinders effective notice and will consider whether any adjustments to the patent system are warranted.

Panel 2: Patent Remedies

This panel will discuss trends in damage awards, the current standards governing patent damages, and their impact on patent value and innovation. It will examine various approaches to damages calculation and the evidence used in assessing damages, particularly in the context of reasonable royalty determinations. This panel will also explore permanent injunctions in patent cases in the wake of the Supreme Court's *eBay* decision and the impact of recent changes to the doctrine of willful infringement.



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